



# THE SPARK

October, 2024

Home of the Cincinnati Repeater System

Cincinnati, Ohio

Jamie Isaacs will be conducting a presentation on Amateur Radio DMR to members of the Cincinnati FM Club at the October meeting. It is suggested that interested members bring their DMR radios and their laptops with DMR software and programming cable.

At their August meeting Jamie spoke about GMRS and the Southwest Ohio GMRS Association.



## CFMC General Meeting Minutes

August 7, 2024

### Attendance:

|                     |                        |
|---------------------|------------------------|
| K8FR, Fred Ruzick   | N8JLI, Jamie Isaacs    |
| WA8FOZ, Bill Klyklo | KD8GHO, Clifton Powell |
| WA8VBP, Al Gerth    | N8PES, Jon Banning     |
| N2HTE, Michael Head | KD8JWN, Bob Shokler    |
| W8SCK, Bob Conrad   | W9OBQ, Don Thie        |
| W8MRG, Bob Garfield | KA8FXR, Richard Turner |

Call to order by KD8JWN, 7:30 PM

Pledge of Allegiance

Minutes of June 2024 and July 2024 Meetings approved: FOZ/FR

Treasurer's report approved: SCK/OBQ

Membership Report: No Activity

Old Business: No old business

### Discussions:

DMR presentation to be presented by Bob Conrad

Presentation by Jamie Isaacs of the Southwest Ohio GMRS Association on local GMRS activity. He also demonstrated modern direction-finding equipment.

Various member comments.

Motion to adjourn: VBP/SCK

Meeting adjourned 8:30 PM

Respectfully submitted,

Michael Head, N2HTE, Secretary

Please submit your dues NOW  
For your 2024 CFMC membership renewal!

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## CINCINNATI FM CLUB

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### 2024 Membership Renewal/Application

Please support the CFMC. Call Fred Ruzick, Membership Chair, with questions. Contact info below

NAME \_\_\_\_\_  New Member  
CALL \_\_\_\_\_ LICENSE CLASS \_\_\_\_\_  Membership Renewal  
ADDRESS \_\_\_\_\_  Repeater Code Request  
(number and street) (city, state and zip) PHONE NUMBER \_\_\_\_\_ Amount Enclosed \$ \_\_\_\_\_  
EMAIL \_\_\_\_\_

OTHER HAMS IN HOUSEHOLD (at same address)

NAME \_\_\_\_\_ CALL \_\_\_\_\_ LICENSE CLASS \_\_\_\_\_

NAME \_\_\_\_\_ CALL \_\_\_\_\_ LICENSE CLASS \_\_\_\_\_

I will follow the "CFMC Repeater Operation Practices" document dated 3/24/2009. It is available on the internet at [http://cfmc.us/CFMC\\_Operating\\_Guide.pdf](http://cfmc.us/CFMC_Operating_Guide.pdf) or by mail. By signing this form, I agree to abide by these practices and understand that adherence to these practices is a condition of continued membership in the CFMC and use of its repeaters.

SIGNATURE \_\_\_\_\_

DATE \_\_\_\_\_

Mail to: **Fred Ruzick, K8FR**  
**c/o Cincinnati FM Club**  
**3257 Wheatcroft Dr**  
**Cincinnati, OH 45239-6130**  
**(513-741-8873 email k8fr@arrl.net)**

**RENEWALS: \$20** **Memberships lapse after January 1st. SPARK mailings continue through June**

NEW MEMBERS: \$10 Initiation + \$10 Dues = \$20 Total

(Please make check payable to **Cincinnati FM Club**)



The SPARK is the official newsletter of the Cincinnati FM Club and is published bi-monthly in anticipation of the bi-monthly Club Meeting at its normal meeting place: Mobilcomm, 1211 Sharon Rd, Cincinnati, OH 45240-2998. The Editor is Ken Irwin, W8LTT. Articles, suggestions and digital photos may be submitted to Ken via email at W8LTT@arrl.net, or by USPS at 358 Oliver Rd, Cincinnati, OH 45215-2615.

The deadline for the December edition is Wednesday, November 20, 2024 for material submitted for publication or copied from other sources. Articles may be edited for clarity and length.

The on-the-air meeting on 146.28/146.88 MHz will be held at 9:00 PM, Wednesday, November 6, 2024.

The regular meeting at Mobilcomm is at 7:30 PM on Wednesday, December 4, 2024.

**BE SURE TO MARK YOUR CALENDARS!**

Go to <http://cfmc.us> for the latest news and the most recent edition of SPARK!

# The Cincinnati FM Club

Club Station Call: WB8CRS

Monthly Meeting: First Wednesday, Even Months, 7:30 PM

Cincinnati FM Club  
 1211 Sharon Rd  
 Cincinnati, OH 45240-2916

## The Cincinnati Repeater System

**"88" System All transmitters are simulcast.**

| Location       | GREENHILLS  | MT. REPOSE  | TAYLOR MILL | ELIZABETHTOWN | GREEN HILLS         |
|----------------|-------------|-------------|-------------|---------------|---------------------|
| Frequency      | 146.88      | 146.88      | 146.88      | 146.88        | 443.40              |
| Offset         | -0.6        | -0.6        | -0.6        | -0.6          | +5.0                |
| Antenna Height | 735 ft.     | 370 ft.     | 405 ft.     | 250 ft.       | 735 ft.             |
| A.M.S.L.       | 1541 ft.    | 1243 ft.    | 1225 ft.    | 1170 ft.      | 1501 ft.            |
| H.A.A.T.       | 825 ft.     | 558 ft.     | 496 ft.     | 177 ft.       | 725 ft.             |
| Access Tone    | PL 123.0 Hz | PL 123.0 Hz | PL 123.0 Hz | PL 123.0 Hz   | DMR<br>Color Code 1 |

**EchoLink Node 809821**

Our connection to the DMR bridge was lost and we reconfigured our DMR repeater to the Brandmeister server. Some of the talk groups use different TG numbers, so your code plug needs to be edited to get connectivity. The table below gives you the information needed for the change.

| CFMC typical DMR user configuration using Brandmeister server.   |      |            |         |   |
|--|------|------------|---------|---|
| BM TG numbers: <a href="https://www.pistar.uk/dmr_bm_talkgroups.php">https://www.pistar.uk/dmr_bm_talkgroups.php</a> |      |            |         |   |
| TS   | TG   | NAME       | CALL    | COMMENTS  |
| 2  | 2    | CIN-DAY    | Group   | CFMC, Hamilton, Middletown, Edge-wood<br>CFMC Repeater only<br>Static ID, on all the time |
| 2  | 9    | LOCAL      | Group   |   |
| 2  | 3139 | OHIO       | Group   |   |
| 1  | 91   | World-Wide | Group   |   |
| 1  | 93   | N America  | Group   |   |
| 1  | 3169 | Mid West   | Group   |   |
| 1  | 310  | TAC-310    | Group   |   |
| 1  | 311  | TAC-311    | Group   | Not call channels. Move to here for long conversations                                    |
| 1  | 9990 | Parrot     | Private | Repeats your voice  |



**CFMC Treasurer’s Report**

9/5/2024

Beginning Checking Balance                    \$5,346.20

No transactions

Ending Checking                                    \$5,346.20

Respectfully,  
Richard Turner, Treasurer

# History of Fire Radio Communications in Hamilton County, Ohio

Going back to the 1800's every town had a fire department, almost all volunteer. By 1950 nearly all towns had a siren to scramble the fire fighters. Fire phones were typically answered at a local store and volunteer homes. In most cases they had to race to the firehouse and activate the siren. In 1950 the new Hamilton County Communications Center started dispatching for towns with new police departments. They also started taking fire calls and dispatched them by activating their siren using Motorola receivers at the firehouse with Quick Call Decoders. Some fire departments soon started adding two-way radios in their fire trucks. Mixing police and fire calls on the existing police transmitter slowly became a problem as more towns came on line.

A new communications center building built in 1960 had 4 new consoles. One was dedicated to fire with a full time dispatcher. All fire radios and siren activated receivers were moved to a new fire frequency of 33.94 Mhz. Commercial dispatch consoles were not available, so my father, with help from myself, built the new consoles.

In late 1960 a start-up company in Overton Nebraska named Plectron sold Sharonville fire department tube receivers that were placed in fireman's homes and activated by a tone. The communications center installed an encoder to activate the receivers. This was a major game changer for alerting volunteer fireman. Most of the firemen could not hear their siren, especially if their house was closed up. The original single tone encoder could handle only 20 departments. By 1962 the communications center was running out of tones. I was in my senior year working towards my electrical engineering degree. For my thesis I designed and built a new 2 tone system that could handle 1,091 departments. Plectron quickly adopted the new system.

In 1978 Plectron took 5 engineers and isolated them in a rented shop in town. They were to develop a pager. In April 1981 they shipped their first units. They were received with enthusiasm and sold for \$129.50. They soon developed reliability problems. In early 1982 Motorola introduced their Minitor fire pager compatible with Plectron Tones. It also could save up to 17 minutes of voice storage so the fireman could replay the fire call. This put a nail in the Plectron pager . Plectrons large investment in the pager development lead to their sale and eventually dropping of their fire receivers.

*By: Bob Conrad, retired CEO & Chairman of the Board of Mobilcomm, a Motorola two-Way Radio Sales and Service Center.*

**CFMC On the Air Net**

**September 4, 2024**

**9:00 PM EDT**

Check-ins:

W9OBQ, Don, Net Control

KD8JWN, Bob, President

WA8FOZ, Bill, Vice-president

KA8HXR, Treasurer

N2HTE, Mike, Secretary

W8SCK, Bob, Trustee

K8FR, Fred, Membership

W8LTT, Ken, Editor

WA8VBP, Al, Director

KD8GHO, Clifton

KE8TEY, Stephen

KD8ZLD, Mark

Treasurer: Solvent

Trustee: Reports of noise on the repeater is being investigated.

No new business reported.

Net closed 9:19 PM

Respectfully submitted,

Michael Head, N2HTE, Secretary

## EXECUTIVE COMMITTEE — CINCINNATI FM CLUB 2022-2025

|                            |                |        |              |  |
|----------------------------|----------------|--------|--------------|--|
| <b>President:</b>          | Bob Shokler    | KD8JWN | 513-931-2292 | <a href="mailto:rshokler@cinci.rr.com">rshokler@cinci.rr.com</a> |
| <b>Vice President:</b>     | Bill Klykylo   | WA8FOZ | 513-522-0593 | <a href="mailto:klykylo1@cs.com">klykylo1@cs.com</a>             |
| <b>Secretary:</b>          | Mike Head      | N2HTE  | 315-427-9132 | <a href="mailto:MJH@headmgmt.com">MJH@headmgmt.com</a>           |
| <b>Treasurer:</b>          | Richard Turner | KA8HXR | 513-221-5707 | <a href="mailto:rt_turner@hotmail.com">rt_turner@hotmail.com</a> |
| <b>Director: 2023-2026</b> | Al Gerth       | WA8VBP | 513-677-3837 | <a href="mailto:algerth@gmail.com">algerth@gmail.com</a>         |
| <b>Director: 2024-2027</b> | Don Thie       | W9OBQ  | 513-923-4013 | <a href="mailto:W9OBQ@arrl.net">W9OBQ@arrl.net</a>               |
| <b>Director: 2022-2025</b> | Bill Klykylo   | WA8FOZ | 513-522-0593 | <a href="mailto:klykylo1@cs.com">klykylo1@cs.com</a>             |
| <b>Station Trustee:</b>    | Bob Conrad     | W8SCK  | 513-300-6700 | <a href="mailto:bob@heavenwire.net">bob@heavenwire.net</a>       |
| <b>Webmaster:</b>          | Richard Kuns   | KC8TW  | 513-907-5848 | <a href="mailto:rkuns@one.net">rkuns@one.net</a>                 |
| <b>Membership:</b>         | Fred Ruzick    | K8FR   | 513-543-4536 | <a href="mailto:K8FR@arrl.net">K8FR@arrl.net</a>                 |
| <b>Editor SPARK:</b>       | Ken Irwin      | W8LTT  | 513-608-1898 | <a href="mailto:sailorirwin@gmail.com">sailorirwin@gmail.com</a> |

### CFMC members

|        |            |            |
|--------|------------|------------|
| N8PES  | Jon        | Banning    |
| WB8NUT | J. Duffy   | Beischel   |
| W8OUU  | James      | Benson     |
| W8SCK  | Robert C.  | Conrad     |
| KE8BHC | Leanne     | DeForest   |
| WB9CPU | David      | DeForest   |
| KC8KKC | Barry E    | Franz      |
| WA8VBP | Allen      | Gerth      |
| WD8LKO | Ronald     | Grote      |
| N2HTE  | Michael    | Head       |
| W8LTT  | Kenneth J. | Irwin      |
| KA8YRN | Dennis J.  | Jones      |
| WA8FOZ | William M. | Klykylo MD |
| KC8TW  | Richard    | Kuns       |
| W8AUV  | John       | Maier      |
| KD8GHO | Clifton    | Powell     |
| K8FR   | Fred M.    | Ruzick     |
| WW8ZZ  | Alan       | Schauer    |
| K8OP   | Hep        | Shockley   |
| KD8JWN | Robert L   | Shokler    |
| W9OBQ  | Donald R   | Thie       |
| KA8HXR | Richard    | Turner     |
| N8DHW  | David      | Williams   |



## History of Radio Communications in Hamilton County, Ohio

*By: Bob Conrad, retired CEO & Chairman of the Board of Mobilcomm, a Motorola two-Way Radio Sales and Service Center.*

Radio dispatching began in Cincinnati with the creation of Station X on June 16, 1931, operating from the basement of City Hall in the Ninth Street and Central Avenue corner. Station X (WKDU) used a 500 watt one-way AM radio transmitter on 1,710 KHz (just above the AM broadcast band) to make broadcasts to police and fire vehicles equipped with receivers. In 1941 they moved to the water towers in Eden Park and upped the transmitter power to 1,000 watts. Prior to Station X police and fire would need to return to their stations or find a call box after each call or every hour to check for additional calls. As a child, I remember people dropping off their AM radio to be retuned by my dad to 1,710 KHz so they could listen to police calls at the top of the dial

In 1941 two-way radios were introduced. Indian Hill Rangers purchased a Link AM radio with a receiver and transmitter that could talk back to the dispatcher. My father, Chris Conrad, installed a similar AM Motorola system in Reading. On December 7th, a Sunday morning, while tuning the last mobile transmitter the dispatcher hollered out to Chris that the Japs were bombing Pearl Harbor. The city of Cincinnati purchased it's first two-way system in February of 1941 and entered into an agreement to also dispatch for Deer Park Police. Further purchases were frozen in place until after WWII.

During WWII there was an explosion in technology. An almost immediate change was moving from AM (Amplitude Modulation) to (FM Frequency Modulation) which greatly increased range and saved manufacturing cost and space. The invention of the squelch which kept the speaker muted until there is a call brought sanity to listening to the receiver. It also brought the quick development and mass production of two-way radios for tanks, jeeps, communications centers and the walkie-talkie and horsey-talkie for the field troops

Post WWII the FCC would issue licenses for police and taxi cabs only. The Sheriff and the City of Cincinnati quickly equipped their cars. There were 10 local cities and villages covering from Indian Hill to Wyoming that had dispatch centers. They started buying Motorola two-way radio systems on 155.61 Mhz forming the Valley Radio System. The Sheriff dispatched from the court house on 39.58 Mhz and housed their cars underneath the court house.

In 1949 a motorcycle cop named Maurice Wesselmann Sr. (Wess) approached the county commissioners with a plan to build a communications center that would dispatch for the Sheriff and villages and cities that wanted to have their own police department but could not afford the cost to dispatch. He would charge these entities per dispatch to help defray costs for the county. Another first was that the center would be staffed by civilians, something unheard of at the time. Wess argued that the training for a dispatcher should be different than that of a police officer. The Sheriff and Commissioners agreed to the plan. Thus was born the **Hamilton County Communications Center**.

It so happened at that time the County Engineers were building a large maintenance and parking facility North of Drake Hospital in Hartwell. The West end of the building was lined with offices and tool rooms. They agreed to build a second floor above the offices for the new 2 communications center. Further west was a high hill also owned by the county where a 300' tower was erected. The Engineers built a road from their building to the tower. They also put up telephone poles and ran a telephone line between the tower and communication center. The county Sheriff's radios at the time were maintained by Guy Carnish. My father maintained all the other Motorola radios for police and taxi cabs. He also worked full time for WCPO TV.

Wess approached Chris to build and maintain the new center and leave his job at WCPO. Chris turned him down saying he could not afford to give up his salary at WCPO. Wess once again got creative and proposed a fixed monthly labor contract plus parts to maintain the system. He also added an additional incentive that all users of the system must have a contract with Chris on their equipment. A mobile unit at that time cost \$5 plus parts per month to maintain. Dad worked for WCPO AM during WWII and helped build WCPO TV after the war. He was now stuck in a dark room in front of an oscilloscope adjusting audio volume. He hated it so everything fell into place and he accepted Wess's offer. Thus was born the concept of a Maintenance Contract, unheard of at the time

The new communications center needed to be built from scratch. Chris built 2 dispatch consoles. I was with him when he and Wess carried a new 250 watt Motorola base station into the building at the tower site. Wess was a true hands on guy. You always found him in the middle of what was going on.

About 1957 the Sheriff wanted to leave the court house and move to a county owned farm located on Hamilton Avenue near the later build Interstate 275. There was a barn on the property. Dad and I erected a temporary antenna on the barn and connected it to a mobile unit. The test was to see if we could talk to Sheriff cars down town and in Mount Washington. We were successful enough that the county commissioners agreed to build a new Sheriff's garage which included the communications center on the property.

Going back to the 1800's nearly every town had a fire department, almost all volunteer. By 1950 all towns had a siren to scramble the fire fighters. Fire phones were typically answered at a local store and volunteer homes. In most cases they had to race to the firehouse and activate the siren. As the Communications center started taking on new towns with startup police departments they also took fire calls and dispatched them by activating their firehouse siren using Motorola receivers with Quick Call Decoders. Some fire departments started adding twoway radios in their fire trucks. Mixing police and fire calls on the existing police transmitter slowly became a problem as more towns came on line.

The new communications center built in 1961 had 4 new consoles. One was dedicated to fire with a full time dispatcher. All fire radios and siren activation receivers were moved to a new fire frequency of 33.94 Mhz. Commercial dispatch consoles were still not available, so my father, with help from myself, built the new consoles and an elaborate light system that displayed the status of all the police cars. The display could be seen and controlled by all the dispatch points. Ohio just brought on line a new teletype system and one was installed as part of the new center. Bill Smith, a senior dispatcher, fascinated by the new addition entered William Smith for a search of felons. The paper started rolling out of the teletypewriter as he dragged it across the floor. After about 20' he turned it off.

In late 1960 a start-up company in Overton Nebraska named Plectron sold Sharonville fire department tube receivers that were placed in fireman's homes and activated by a tone. The communications center installed an encoder to activate the receivers. This was a major game changer for alerting volunteer fireman. Most of the firemen could not hear the siren, especially if the house was closed up. The original single tone encoder could handle only 20 departments. By 1962 the center was running out of tones. I was in the senior year of my electrical engineering degree. For my thesis I designed and built a new 2 tone system that could handle 1,091 departments. Plectron quickly adopted the new system.

In the early 70's a new building was built for the center only. This time Motorola furnished new consoles and there were many modern upgrades plus a lot more room. Recent new game changers are the 911 system and the Motorola trunking transmitters with 6 transmitter sites spread around the county.

On May 7, 2024 I was given a tour of the communications center. I have been retired for 26 years and the only thing I recognized was the dispatch room walls. The room was congested but well organized. I was told that they are in the process of building a new building.

I would like to recognize Maurice Wesselmann Senior. He was my mentor and a source of great encouragement. I would often make the communications center my last service call for the day. It seemed Wess would always be hanging around and we would talk after I was finished. I owe much of Mobilcomm's success to Wess.

