THE

CFMC
Cincinnati FM Club

SPARK

August 2019 **Home of the Cincinnati Repeater System** **Cincinnati, Ohio**

New feature in SPARK! Beginning with this issue, we will present, in a serialized form, the History of Mobilcomm. Bob Conrad has kindly given us permission to publish it on these pages. This document exists as a pamphlet available within the company. It relates the evolution from the beginning as a small family business to the company it has become today.

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My First Experience With Amateur Radio

It's the summer of 1956, and I'm just out of high school. It is dark and I am driving on a mountain road that I haven't been on before in southwest Oregon. I have dropped my girlfriend off at a motel (our relationship was platonic) and I am driving her new Chevrolet looking for a place to camp because I can't afford the motel. After a few miles I'm not finding anything, so I attempt a 3-point turn but the left rear wheel drops off the pavement (there is no shoulder) and it sits free in the air. I can not move the car. I don't have any flares and the car is almost crosswise on the road. I'm 3,000 miles from home and I don't know what to do. My main concern is that a huge log truck (some of which I had encountered earlier) would come around the curve and put an end to it all. Then a guy pulled up and seeing my predicament asked if I needed help. I explained what had happened and it was obvious that I needed wrecker. He had a lot of radio gear in his car and in a minute he said one would come from Coos Bay, the nearest city. He waited until the wrecker arrived and it towed me about 2 feet. There was no damage to the car, just to my wallet and my pride. In all the excitement I did not get his name or callsign. The rest of the trip was uneventful, but it stayed in my mind that Ham radio saved me a great deal of distress or more, and I hoped that the day would come when I would be in a position to return the favor to someone who needs it.

Richard, KA8HXR

Cincinnati FM Club General Meeting Minutes June 5, 2019

Attendance:

KD8JWN	Bob Shokler	WA8FOZ	Bill Klykylo
NG8P	Howie Hunt	W9OBQ	Don Thie
W8LTT	Ken Irwin	KD8MMY	John Major
KC8KKC	Barry Franz	W8SCK	Bob Conrad
KA8HXR	Richard Turner		

Guests:

KE8BAZ	Dave Hemmerle
W8MAG	Bob Garfield

Call to order and Pledge of Allegiance led by KD8JWN at 7:35 PM.

Motion to accept Treasurer's report as published in SPARK: W8SCK/ second WA8FOZ; passed.

Motion to accept April 2019 Minutes as published in SPARK: KD8MMY/ second W8SCK; passed.

Nominations Committee report as published in April 2019 Spark. Motion to accept KC8KKC/ second W8LTT; passed. The slate of officers nominated were thereby elected.

Old Business: None

New Business:

Field Day operations are to be conducted at Hamilton County Red Cross Headquarters, 2111 Dana Avenue on June 22-23.

Motion to adjourn WA8FOZ/ second KD8MMY; passed. Meeting adjourned at 7:49 PM.

Respectfully submitted,

Bill Klykylo, WA8FOZ

Cincinnati FM Club On The Air Net

July 3, 2019

Net called to order by Don Thie, W9OBQ, Net Control at 9:05 PM

Check-ins:

KD8JWN	Bob	W8TDA	Kitty
WA8FOZ	Bill	W8AUV	John
KA8HXR	Richard	W3TFI	Bob
NG8P	Howard	W9OBQ	Don
W8LTT	Ken		

Net closed at 9:30 PM.

Respectfully submitted.

Bill Klykylo WA8FOZ

A publication of . . .
The Cincinnati FM Club
1211 W. Sharon Rd.
Cincinnati, OH 45240

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 next edition is Saturday, September 20 for material submitted for publication or copied from other sources. Articles may be edited for clarity and length.

Meeting schedule: Wednesday, August 7 at 7:30 PM at MobleComm at 1211 Sharon Rd.. The on-the-air meeting on 146.28/146.88 is at 2100 hours July 3, 2019.

BE SURE TO MARK YOUR CALENDARS!

Go to http://cfms.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

CFMC Repeater System

	"88" System				
Location	**GREENHILLS**	**MT. REPOSE**	**TAYLOR MILL**	**TAYLOR MILL**	**GREEN HILLS**
Frequency	146.88	146.28	146.28	147.03	443.40
Offset	-0.6	R/O	R/O	+0.6	+5.0
Antenna Height	735 ft.	255 ft.	405 ft.	405 ft.	735 ft.
A.M.S.L.	1541 ft.	1130 ft.	1225 ft.	1225 ft.	1541 ft.
H.A.A.T.	825 ft.	334 ft.	496 ft.	496 ft.	825 ft.
Access Tone	PL 123.0 Hz	PL 123.0 Hz	PL 123.0 Hz	PL 123.0 Hz	DMR Color Code 1
	EchoLink Node 809821				

Please submit your dues NOW

For your 2019 CFMC membership renewal!

CINCINNATI FM CLUB

2019 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) Amount Enclosed $ _____ ($0 if code request)

PHONE NUMBER _____

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 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**)

WB8CRS

146.28/.88 147.63/03 448.40/443.40 (DMR)

EXECUTIVE COMMITTEE — CINCINNATI FM CLUB 2018-19

President:	Bob Shokler	KD8JWN	931-2292	rshokler@cinci.rr.com
Vice-President:	TR Stoner	WR4T	474-5659	wr4t@yahoo.com
Secretary:	Bill Klykylo	WA8FOZ	522-0593	klykylo1@cs.com
Treasurer:	Richard Turner	KA8HXR	221-5707	rt_turner@hotmail.com
Director: 2017-19:	Jim Bunning	KD8HXP	769-0140	jabunning@fuse.net
Director: 2018-20:	Kitty Hevener	W8TDA	471-8866	W8TDA@arrl.net
Director thru 6-30-19:	Bill Klykylo	WA8FOZ	522-0593	klykylo1@cs.com
Station Trustee:	Bob Conrad	W8SCK	756-9425	bob@heavenwire.net
Operations	Jim Benson	W8OUU	825-1254	W8OUU@hotmail.com
Webmaster	Richard Kuns	KC8TW	907-5848	rkuns@one.net
Membership	Fred Ruzick	K8FR	543-4536	K8FR@arrl.net
Editor SPARK:	Ken Irwin	W8LTT	608-1898	W8LTT@arrl.net

Greene County Fairgrounds and Exposition Center in Xenia, Ohio.
“Our early indications were that would be a big year and it lived up to our expectations,” said Hamvention General Chair Jack Gerbs, WB8SCT. “Our more than 700 volunteers worked hard to ensure that we presented a great show for our visitors. It wouldn't have been possible without them. I also want to thank all our vendors and visitors and hope they will all be back next year."
A small part of the increased attendance might be due to the free tickets for admission on Sunday. Sunday only tickets accounted for 800+ of the total attendance. The free day was an effort to allow local non-hams to experience Hamvention. It is expected to be continued next year .
Assistant General Chair Rick Allnutt, WS8G, said that amateur operators from all U.S. states and territories and 60 other countries attended Hamvention 2019. He said comments received about the show were overwhelming positive.
According to Gerbs, the Agricultural Society, Greene County, Xenia Township and the City of Xenia all cooperated in making Hamvention 2019 a success.
Hamvention, the world's largest ham radio show, is sponsored by the Dayton Amateur Radio Association (DARA). It is held the third full weekend in May. The dates for 2020 are May 15, 16 and 17.

W8HJR, Tuesday(7/26/19) at 12:49 AM

Cincinnati FM Club Treasurer’s Report July 16. 2019

Beginning Checking Balance	$10,310.78
Expended Mobilcomm	32.10
	————————
Ending Checking	$10,278.68

Respectfully, Richard KA8HXR CFMC Treasurer

And from the ARRL Letter, July 18, 2019:

Centenarian Radio Amateur's Efforts Helped Pave the Way to the Moon

The Nashville Tennessean newspaper recently featured the story of a 104-year-old ARRL member who contributed to NASA's effort to put the first humans on the moon 50 years ago this month. Cary Nettles, W5SRR, of Columbia, Tennessee -- who calls himself the nation's oldest rocket scientist still alive -- was a NASA project manager and research engineer on rocket propulsion systems in the 1950s and 1960s.

While working on the Centaur second-stage rocket program, Nettles determined that the rocket engine failures NASA was experiencing were a result of misdirected exhaust destroying the vehicles' engines. Nettles told the *Tennessean* he came up with an "exhaust pipe" that solved the problem. In May 1966, an Atlas-Centaur launcher propelled the first *Surveyor* lander toward the moon. That year, NASA awarded Nettles and colleague Ed Jonash with its Distinguished Service Medal for "their superhuman effort in turning the troubled rocket into a reliable upper stage," according to a 2004 NASA publication, "Taming Liquid Hydrogen -- The Centaur Upper Stage Rocket 1958 - 2002."

On July 16, 1969, a Saturn V rocket with a liquid hydrogen-fueled second stage carried astronauts Neil Armstrong, Buzz Aldrin, and Michael Collins to their rendezvous with the moon. Nettles retired from NASA the following year.

Nettles got his Amateur Radio license in 1945 and remains active on 40 meters as well as on VHF and UHF repeaters. He is a member of the Maury Amateur Radio Club. In addition to sustaining his interest in ham radio over the decades, Nettles is an enthusiast of "large-scale" steam trains, which he works on in his basement. Look for him Tuesdays at 1400 UTC on 7.215 MHz on the Steam Railroad Net.
In 2015, the year he turned 100, the ARRL Tennessee Section presented Nettles with its Elder Statesman Award.

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CFMC Meeting Program on June 5, 2019

Member Howie Hunt, NG8P, presented a clinic describing the programming of the Baofeng UV-5R handheld transceiver from the front panel. Although most users set the radio up using computer software, either the software supplied by Baofeng or commercial programs, such as Chirp.

He demonstrated the programming from the front panel to either set up the radio or alter the settings in the field after setup. He also demonstrated several keyboard shortcuts to access radio information. This method works for several other Baofeng models.

Mobilcomm History
Celebrating 75 years of Communications Service

The early days of Conrad Radio Service

December 7th, 1941 my father, Chris Conrad, was tuning the transmitter on the last mobile unit he had just installed for the City of Reading Police Department. This was the first Motorola two-way AM radio system sold in the Greater Cincinnati area. It was a Sunday morning, and he was on the street outside the police entrance when a woman from across the street threw open her window and yelled out, "The Japs are bombing Pearl Harbor." We have always chosen this as the birth date for our company. At the time, my father had a side business he called Conrad Radio Service. It consisted primarily of repairing AM radios and also tuning other AM radios to 1910 KHz so his customers could listen to Cincinnati police dispatch.

The bombing of Pearl Harbor changed everything. Our country was thrown into war with Japan on the Asian front and soon would be at war with Germany on the European front. Everybody and everything went towards the war effort. I remember looking out the window while at my grandma's house and seeing an army dump truck driving slowly down the middle of the street. My grandma gave me a bag of flattened tin cans and told me to run out and put them in the truck. I asked her why and she said, “They need them to make bullets.”

After WWII

After the war my four uncles came home unscathed. My father is the oldest of 12 children so there was plenty of celebration. All my aunts and uncles were dating and getting married. Domestic production started up again and Motorola came out with their low band PS Units (FMTR-30D) better known as “coffin units” in 1945 and the VHF version when the FCC opened up the VHF (150 MHz) band in 1947. They were big and ate up most of the trunk space, but they were revolutionary. Using low current drain Loctal Tubes developed during the war, the receivers were FM and sported better than .3 microvolts receiver sensitivity. The transmitter box could put out up to 60 watts.

Galvin Manufacturing hired Dan Noble in 1940. He invented the squelch circuit and moved from AM to FM after the war for the police and taxicab community. With FM you could saturate the IF limiters in the receiver which allowed the squelch to work with low signals and reject amplitude noises like power line and ignition noises. The receivers were sensitive - even by today's standards. Galvin Manufacturing made a lot of equipment for the military during the war years. They changed their name to Motorola after the war in 1947.

Motorola was not alone

A fierce competitor before the war and right after was Link Radio, owned by Fred Link. They made quality equipment, and the Indian Hill Rangers used their FM equipment prewar in 1940. After the war they were very competitive with Motorola. They went out of business in 1949. I got to know Fred Link in the 70s and asked him what happened. He said that during the war the government kept pushing him to get production up to the point where they purchased a larger building for him. After the war, they came back and demanded

reimbursement for the building and that forced him into bankruptcy. I don't think Fred was financed nearly as well, nor had the marketing skills of Motorola.

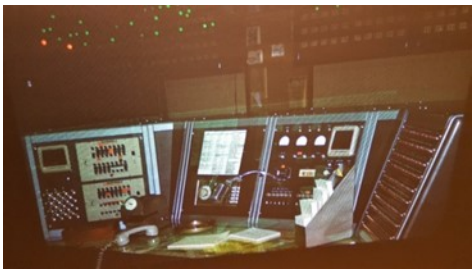
Motorola after the war

Dad worked part time adding Motorola equipment accounts, specifically taxicab and local police departments. In 1947, Motorola came out with the DISPATCHER FMTRU-5V which was 10-inches wide and ran 10 watts. In 1950 Motorola came out with the 80D which was one case 15-inch wide using miniature tubes and a Dynamotor for 600 volts and transmitted 60 watts. It was still bulky and heavy. They soon came out with the 40D, doing away with the dynamotor used in the 80D and ran everything off one vibrator. The 80D and 40D dominated the market in the early 50s. This lead to rapid growth of two-way radios used in taxicabs. It also spawned the Valley Police Radio System, a Hamilton County suburban radio network, joining 10 police departments together on one frequency. This promoted mutual aid, yet they maintained their independence by each providing their own dispatch services. The later 41V was just what the taxi industry and small police departments were waiting for and dad's business kept growing. police departments together on one frequency. This promoted mutual aid, yet they maintained their independence by each providing their own dispatch services.

Beginning of the Hamilton County Communications Center

Maurice Wesselmann, Sr.

My dad Chris still worked at WCPO-AM after the war. The Hamilton County Sheriff bought Motorola two-ways radios and Guy Carnish maintained the system. In 1950 a Hamilton County motorcycle patrolman named Maurice Wesselmann, or “Wess,” approached the Hamilton County Commissioners with the idea of setting up a county communications center. Small towns were growing and wanting their own police departments and they did not have the funds to hire their own dispatchers. The commissioners saw this as an opportunity to reduce patrol car costs. Wess also proposed the new towns would pay for the service but at a greatly reduced rate over what it would cost for them to have their own dispatchers. Nearly all of these towns started out with one or two police cars and not 24-hour patrols. The sheriff felt strongly trained sheriff officers should dispatch. Wess argued, on the other hand, the dispatchers needed other skills sheriff deputies were not trained in and this move would free up officers for the road. Wess's proposal was finally approved. The implementation would require a physical place for the center and the technical expertise to build and maintain the new radio system.



Second generation of the communications center when they moved into new facilities on Hamilton Avenue with the sheriff's department. Four consoles were hand built in our shop.

The county engineers were getting ready to build a new garage behind Drake Hospital. Engineers offices were on the west side of the building. They added a second floor for the new communications center. In 1951,Wess contacted dad to see if he would be interested in maintaining the new county radio communications system. During WWII, dad worked at WCPO-AM, which was located on top of the Daylight Building on Gilbert Avenue near downtown Cincinnati. In 1947, WCPO received a license for a TV station, and they assigned dad to helping

build the new station. They erected a tower on Clifton Hill and built studios under the radio tower. There was a crew assigned to actually build the station that was finishing up another TV station they built in Indianapolis and were coming to Cincinnati next. I remember dad sharing how he tested moving WCPO-AM to the new tower. He transmitted on a long wire antenna they strung off the new TV transmission tower. The AM station only broadcast 250 watts, but the radiation pattern was too great and oblong – interfering with adjoining stations – it could not be licensed.

Third generation communications center when they moved into their own facilities.

Chris goes full time with his two-way radio business

By 1949, WCPO-TV was on the air and dad got assigned working in a dark room staring at an oscilloscope adjusting audio levels, which drove him crazy. So, in 1951 when Wess approached dad to be the new county "radio man" he was ready for a move. But, he did not make it easy for Wess. He told him if he could guarantee the income he was getting at WCPO he would take on the endeavor. Wess, in his innovative way came up with the idea of maintenance contracts on all their equipment and he would require all users to also have a maintenance contract with dad. At five dollars per month, per unit, plus parts, dad was able to quit WCPO and go into business for himself.

The county built a 300-foot tower on the hill just west of the communications center. The engineers built a road up to it and put in a telephone line connecting the tower to the communications center. Dad built two consoles from scratch along with everything else it took to get the system up and running. I was with dad and Wess the day they took a new 250-watt Motorola base station up the hill and installed it in the new transmitter building at the base of the tower. I took a picture of dad and Wess carrying the new base station into the building.

Chris Conrad

Dad was always a loner. He always figured out how to do everything by himself. He told the story of going into business with a partner when he was young making antifreeze out of copper sulfate. About a year later, their customers came after them because their radiators were being eaten up by the copper sulfate. His partner skipped town and left dad to deal with all the customers. In his later years, dad would tell people that he only hired one person in his life, and I fired her. He actually hired one other person that I know of and she was worse.

In the October issue of SPARK, *MobilComm History* continues, with Bob appearing on the scene.

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Editor note: I was an emergency medical technician, later a paramedic, with the Wyoming Life Squad from 1966 until about 1990. I recall the city relying on Conrad Radio supplying and installing radios and emergency signals for police, fire, EMS and service department vehicles. They also set up a dispatch console in our police station where we served as dispatcher for the Mill Creek Valley communities emergency services until it was taken over by the county. They were always on call 24/7 to service our equipment.