

MRAC FM SIMPLEX CONTEST

The Milwaukee Radio Amateurs' Club (MRAC), one of the oldest, continuously= operating amateur radio clubs in the world, invites you to join us for our annual MRAC= FM Simplex Contest.

This year's contest takes place on the afternoon of
Sunday, February 23, 2025.

This contest aims to encourage amateurs to learn the basics of contesting and simplex= operations and expand the scope of their VHF-UHF operating techniques beyond what's= needed for standard repeater operation.

1. Contest Information:

- a. This event is a sprint, lasting 3 hours from 1:00 pm until 4:00 pm CST.
- b. Contacts are limited to **FM Simplex** on the following amateur bands:
 - i. 2 meter: 1:00 pm – 2:00 pm
 - ii. 70 centimeter: 2:00 pm – 2:30 pm
 - iii. 6 meter: 2:30 pm – 3:00 pm
 - iv. 1.25 meter: 3:00 pm – 3:30 pm
 - v. Digital voice QSOs (using D-Star or Fusion modes): 3:30 pm – 4:00 pm
 1. Any band may be used for these contacts, though 2m and 70cm primary frequencies are recommended (see below).

2. Contest Frequencies:

- a. Contest frequencies fall within the [Wisconsin Association of Repeaters band plan](#).
 - i. 2 meters:
 1. Primary: 146.550, 146.565, 146.580, and 146.595 MHz
 2. Secondary: 147.540, 147.555, 147.570, and 147.585 MHz
 3. Digital Modes:
 - a. D-Star: 145.670 MHz
 - b. Fusion: 146.56525 MHz
 - ii. 70 centimeters:
 1. Primary: 446.025, 446.050, 446.075, and 446.100 MHz
 2. Secondary: 446.125, 446.150, 446.175, 446.200 MHz
 3. Digital Modes:
 - a. D-Star: 446.100 MHz
 - b. Fusion: 446.150 MHz
 - iii. 6 meters:
 1. Primary: 52.550, 52.570, and 52.590 MHz
 - iv. 1.25 meters
 1. 223.520, 223.540, 223.560, and 223.580 MHz

- b. Frequencies essentially follow the ARRL VHF Contest rules and Wisconsin Association of Repeaters' band plans:
 - i. On 2 meters:
 - 1. No contacts on the 146.520 MHz calling frequency or the guard channels 15 kHz above and below 146.520MHz.
 - 2. Any entry from a station heard making QSOs on these frequencies will be disqualified.
 - a. Try to limit activity to the primary and secondary frequencies.
 - ii. As a matter of courtesy and good amateur practice, contacts on other calling frequencies of 52.525, 223.500, and 446.000 MHz are not allowed.
 - iii. Solicitation for simplex contacts on repeaters is allowed.

3. Exchange:

- a. Call Sign and [four-character Maidenhead Grid square](#).
For example, W9RH EN53

4. Scoring:

- a. Point Values
 - i. 2 meter QSOs are worth one (1) point.
 - ii. 70 centimeter and 6 meters QSOs are worth two (2) points.
 - iii. 1.25 meter QSOs are worth three (3) points.
 - iv. Digital mode contacts are worth three (3) points.
- b. Working the Bands
 - i. A station can be worked once per band.
 - ii. A mobile or HT station may be worked more than once per band if it moves to a different grid square.
 - iii. When operating Digital voice, you can work a station in Fusion and DStar. Please indicate the digital mode used for each contact.
- c. Multiplier - Grid Squares
 - i. Each unique grid square can be used once per **band** as a multiplier.
 - ii. You cannot count grids already worked in FM while operating digital. Only a new grid worked while in a digital mode.
- d. Calculating Points
 - i. The score is calculated by multiplying total QSO points by total multipliers.
 - ii. Technicians may multiply their final score by 1.5 for a bonus.
 - iii. A bonus of 100 points is added to the final score for working club station W9RH once on any band.

5. Entry Classifications:

- a. There are four (4) entry classifications:
 - i. **BASE**
 - 1. Less than 150 watts on 6m and 2m and less than 100 watts on 1.25m and 70cm.
 - ii. **MOBILE**
 - 1. Must work from a minimum of two (2) grid squares on any of the bands and power levels the same as those specified for the BASE station classification.
 - iii. **HT** (not a mobile radio run at reduced power)

1. Non-amplified, using any type of antenna, mobile, or fixed operation (This is to encourage innovation and creativity. For example, you could operate from a tall building or observation tower).

iv. **CLUBS**

1. Compete by having their members note their affiliation when they send in an entry.

6. **Awards:**

- a. First Place awards are given in each of the four entry classifications: Base, Mobile, HT, and Club.
- b. Additional First Place awards are given to individuals with the highest score for an individual band and in each classification where *significant* logged activity exists: 2m, 70cm, 6m, 1.25m, and Digital
 - i. So a total of nine (9) First Place awards are possible for each year's contest.
- c. Second and Third Place awards are at the committee's discretion.
- d. Awards will be published on the MRAC website (<https://www.w9rh.org/>) no later than May 1 of the contest year.

7. **Contest Entry Submission:**

- a. All entries must include a copy of the contest log showing the following data for each QSO:
 - i. **Band - Time - Call Sign of Station Worked - Grid Square**
- b. An entry must state:
 - i. The number of QSOs
 - ii. QSO points
 - iii. Grid square multipliers by band
 - iv. Claimed total score
 - v. A copy of the contest log.
 1. Club affiliation is limited to only one club.
- c. **Entries should be sent in by March 15th, 2025.**
- d. Submit logs online at <http://tinyurl.com/mracsimplex2025>. Fill out the Google form and attach you log. We prefer a Cabrillo file but will take a text, CSV or scanned paper log.

HINTS FOR THE NON-CONTESTER - NEW CONTESTER

Before the contest starts

1. Program memory channel with suggested simplex frequencies. Make sure to program these memories with CTCSS and Tone Squelch (Encode – Decode) and repeater offset off. Some Yaesu radios may apply a repeater offset while using the radio in VFO mode.
2. Take advantage of the rule that permits the solicitation of contacts on a repeater.
 - a. Find an open simplex frequency from the secondary frequencies.
 - b. Listen for 60 seconds to make sure it is clear.
 - c. Provide this frequency to the stations on the repeater.
3. The Maidenhead Grid Square is the most common multiplier in VHF/UHF contests and is more important than states.
 - a. Stations can also look up their grid square at:
<https://dxcluster.ha8tk.su/hamgeocoding/>
 - b. In the Milwaukee area, four grid squares intersect near the intersection of Beloit and 70th Street. The location is N 43 00' 00" W 88 00' 00".
 - i. In relation to that intersection:
 1. Northwest quadrant is: EN53
 2. Southwest quadrant is: EN52
 3. Northeast quadrant is: EN63
 4. Southeast quadrant is: EN62

Logging can be done by hand or by PC logging. [N3FJP has a VHF Contest log](#) program. It will not calculate our scoring system however, we will accept the Cabrillo file format for log submission along with our summary sheet. Here is an example of a satisfactory format for logging and scoring . . . Remember if you are mobile to indicate the Grid you are operating from.

Freq/Band	Time	Station Worked	Grid RX	Grid Sent	Grid Multiplier	QSO Points
2m	1:08	N9AUI	EN53	EN53	1	1
	1:10	KA9DNU/M	EN53			1
	1:17	KA9DNU/M	EN63	EN63	1	1
70cm	2:15	N9AUI	EN53	EN53	1	2
	2:25	KB9Q	EN52	EN52	1	2
6m	2:35	N9AUI	EN53	EN53	1	2

	2:45	KB9Q	EN52	EN52	1	2
	2:50	KA9DNU	EN53			2
1.25m	3:10	KA9DNU	EN53	EN53	1	3
	3:15	N9AUI	EN53			3
	3:20	KB9Q	EN52	EN52	1	3
Digital 2m	3:31	N9AUI		EN53		3
	3:35	W9RH	EN62	EN62	1	3
				TOTALS	9	28

EXAMPLE SCORE = 9 x 28 = **252**

In this example, an entry from a Technician Class operator would be multiplied by 1.5 for a score of 378.

Add 100 bonus points to the final score if worked W9RH club station: 378+100=478

**THE MILWAUKEE RADIO AMATEURS' CLUB
FM SIMPLEX CONTEST ENTRY FORM**

SUBMIT WITH LOG BY MARCH 18, 2023 TO
MRAC, P.O. BOX 26938, MILWAUKEE, WI 53226
Or send an electronic copy to: contest@w9rh.org

CLAIMED SCORE _____

NAME _____

CLASSIFICATION (Check only one) : BASE _____ MOBILE _____ HT _____

CALL SIGN _____ LICENSE CLASS _____ GRID SQUARE(S) _____

(MOBILES, LIST ALL GRIDS ACTIVATED – A STATION CAN BE WORKED MORE THAN ONCE IF YOU/THEY ARE IN A DIFFERENT GRID SQUARE EACH TIME)

ADDRESS _____

EMAIL _____ PHONE _____

CLUB AFFILIATION (Limit one) _____

CONTACTS

BAND	QSO'S	Q-PTS	POINTS	NUMBER OF GRID SQUARES
2 m	_____	x 1 =	_____	_____
70 cm	_____	x 2 =	_____	_____
6 m	_____	x 2 =	_____	_____
1.25 m	_____	x 3 =	_____	_____
Digital	_____	x 3 =	_____	_____
		TOTALS	_____	x _____

SCORE EQUALS TOTAL POINTS TIMES TOTAL GRIDS _____

TECHNICIANS, MULTIPLY SCORE BY 1.5. _____

ADD 100 POINTS FOR CONTACT WITH W9RH _____

TRANSFER FINAL TOTAL TO 'CLAIMED SCORE' BLANK AT TOP OF PAGE.

I HAVE READ, UNDERSTOOD, AND FOLLOWED THE PUBLISHED RULES FOR THIS CONTEST. I HAVE OPERATED WITHIN THE LEGAL LIMITS OF MY AMATEUR RADIO LICENSE.

SIGNATURE _____ DATE _____

