

Crew Radios — the FRS Standard and Radio Procedure

How a crew wearing radios sounds like one crew and not five people with walkie-talkies. One kind of radio, one channel plan, one way of talking — so any Vermont official can join any crew and be on the air in a minute.

Check before you wear them. Rule 1-3-7 lets officials use supplementary equipment only "as authorized by the state association," and the NFHS manual allows official-to-official radios "when allowed by state or local association policy." Radios have been approved for use as long as everyone on the crew is equipped.

THREE RULES ABOVE ALL THE OTHERS

Radios add to the crew. They never replace it.

- 1. Every signal still gets given.** The radio carries information *to a partner*; the signals carry it to the coaches, the press box and the crowd. A crew whose radios die must not look any different.
- 2. Silence is the default.** The manual's own warning: overuse defeats the purpose. If a glance or a crew signal will do it, use that.
- 3. Everyone can hear you.** FRS is plain analog FM — the FCC rules do not allow it to be encrypted. A "privacy code" only stops *you* hearing *them*; anyone with a radio set to no code hears every word. Assume the head coach, a parent in the stands and somebody's phone are all listening. Michigan's rule of thumb: **if you don't want it on the PA system, don't say it on the radio.**

THE VERMONT STANDARD: FRS

Family Radio Service — licence-free, cheap, and every brand talks to every other.

WHY FRS

- No licence.** FRS is licensed by rule — there is nothing to register, and the FCC allows it for business as well as personal use, so a paid game is fine. (GMRS shares the same channels at higher power but needs an FCC licence — not worth it for a football field.)
- Interoperable.** Every FRS radio uses the same 22 channels. A Motorola, a Midland, a Cobra and a Uniden all talk to each other on the same channel and code, so a crew assembled on Friday by the assignor can share one channel on Friday night.
- Cheap and replaceable.** A pair of FRS radios can be had for under \$100, and a referee push-to-talk earpiece runs up to about \$100 more. The purpose-built open-mic systems (Vokkero, AXIWI, Yapalong) run roughly \$400 to \$700 *per official*. Lose an FRS radio in the rain and you can buy another at the hardware store.
- Enough.** A football field is 120 yards. FRS handhelds cover that many times over, even on the lower-power channels.

THE CHANNEL PLAN

	Channel Code Tone		
Primary	11	11	97.4 Hz
Alternate	13	13	103.5 Hz
Second field (jamboree, youth doubleheader, adjacent fields)	9	9	91.5 Hz

"Eleven eleven" — easy to remember, easy to say.

Why channels 8-14. Everyone on them — FRS and licensed GMRS alike — is held to half a watt from a handheld, which is plenty for a football field and means nobody nearby can come over the top of you. On channels 1-7 GMRS users may run 5 watts, and radios usually start out on channel 1. Channels 15-22 are the GMRS main channels, where mobiles, base stations and repeaters may run up to 50 watts.

Use a code from 1 to 38 only. Codes 1-38 are CTCSS tones, and Motorola, Midland, Cobra and Uniden number them the same way. Codes above 38 are DCS, and brands number those differently. Some brands — Baofeng, Retevis and Radioddity among them — number even the low codes differently, so on those set the **tone** in the table, not the code number. At the radio check, a partner who can't hear you is the first sign of a mismatched code.

THE RADIO AND HOW YOU WEAR IT

WHAT TO BUY

- An FRS radio** from Motorola, Midland, Cobra or Uniden, or another brand whose manual lists the tone for each code. It should show the channel number and code on its display and have a **keypad lock**.

- An earpiece that fits the radio.** Earpiece jacks are not standard across brands; buy the earpiece made for your radio's model.
- A single-ear earpiece with a push-to-talk button** — an earbud or ear hook in one ear, the other ear open for whistles, players and coaches. The push-to-talk button clips inside the shirt placket or at the sleeve cuff where your hand finds it without looking.
- Push-to-talk, not VOX.** The manual prefers push-to-talk, and the states that publish radio rules require it. Voice activation opens on wind, crowd noise and your own breathing, and blocks the channel for everyone.

SETTINGS — SET ONCE, LOCK, CHECK AT PREGAME

Setting	Set to
Channel / code	11 / 11 (see the plan)
VOX (voice activation)	Off
Roger beep / end-of-transmission tone	Off
Key tones / keypad beeps	Off
Call alert	Off — never press it
Scan / dual watch	Off
Power	High
Keypad lock	On , once set
Volume	Loud enough over a crowd, with the earpiece in

WEARING IT

- Radio on the belt at the back hip, where you do not land on it.
- Cable under the shirt**, from the belt to the collar. Nothing loops outside where a player's hand can catch it.
- The earpiece **always** in. The radio's own speaker is never used on the field.
- Fresh batteries or a full charge **every** game. The Referee's bag carries one spare radio and spare batteries for the crew.

BEFORE THE GAME

The radio check is part of the pregame conference.

In the locker room. Power on, set channel and code, lock the keypad. The Referee confirms everyone reads the same numbers on the display.

Radio check — in crew order, every time:

R: "Radio check. Umpire."
U: "Umpire, loud and clear."
R: "Head Line Judge." ... and so on through the crew.

On the field. Do it again from your pregame positions, at distance. Then listen for a minute. If you hear anyone else on the channel, the Referee moves the crew to the alternate and runs the check again. When you meet game management, ask what channels their staff and the coaches' radios use, and stay clear of them.

Settle at the conference:

- Who reports fouls to whom, by radio or in person.
- Who calls player counts and replaced players (usually the Back Judge to the wing on the substitute's sideline).
- What the crew does if a radio fails (next section).

HOW TO TALK

Press · pause · speak · release.

- Press, pause a full second, then speak.** Talking before the button is down cuts off the first word, and the first word is usually the name.
- Name who you want, then who you are, then the message.** "Line Judge, Back Judge — white two-two got off." If it is for everyone, start with "Crew."
- One breath.** If it takes longer than five seconds, walk over and say it.

- **Jersey numbers digit by digit, with the colour.** "White five-four," never "white fifty-four" — "fifty" and "fifteen" sound alike over a radio.
- **Plain English.** No codes, no nicknames, no ten-codes.
- **Confirm what matters.** Foul information and anything that changes the down or the clock gets a short readback. Everything else gets "Copy" or a nod.
- **Didn't hear it?** "Say again." Never guess.
- **One voice at a time.** Nobody has to be the crew saver. If two people key up at once, both stop; the Referee speaks first.
- **"Hold."** Anyone may say it once: everybody off the air. The Referee clears it with "Go ahead."
- **Release the button.** A stuck button blocks the whole crew. If you hear nothing but wind or crowd, somebody is keyed up — check your own first.

WHAT TO SAY

The manual's list, and the words to use for each.

Situation	Who	Say
Replaced player got off before the snap	BJ to wing on that sideline	"Line Judge, Back Judge — white two-two off."
Replaced player still on the field	BJ to wing	"Line Judge, Back Judge — white two-two still on."
Late substitute / too many	Any to R and U	"Referee, Line Judge — blue has twelve, count again."
Foul report for the coaches	Calling official or R to the wings	"Crew — holding, offence, white seven-four. Ten from the spot. Second and fourteen. Clock on the snap."
Numbering exception	R or U to the wings	"Wings — numbering exception, white eight-three at left tackle."
Ball in or out of bounds	Covering wing to R	"Referee, Head Line Judge — stayed in, wind it." / "Out."
Five will get you one	HL to R	"Referee, Head Line Judge — five gets one."
Wrong down on the box	Any to HL	"Head Line Judge, Umpire — box shows third, should be second."
Time-outs remaining	R to the crew, after each one	"Crew — time-out blue. Blue one left, white two."
Back Judge to the end line	BJ to the crew	"Crew, Back Judge — going to the end line."

WHEN TO BE SILENT

The manual's list — the radio stays quiet:

- During the **coin toss**, at the start of the game and in overtime.
- While the **Referee and another official are talking to a coach**.
- While **other officials are talking** to each other.
- While the **Referee is announcing** a foul on the stadium microphone.
- **During live-ball play.** Radios are for dead-ball information — and not when the snap or free kick is about to happen.
- **When more than one flag is down.** Come together and talk in person, then report to the Referee as normal — not by radio.

And never on the radio:

- Opinions about coaches, players, the crowd, the game or each other.
- Advice about what might happen. "Watch six-six," "that's twice for three-two" — say it in person at the next break, if at all.
- Jokes, scores from other games, rides home, anything personal.
- Arguing a call. Disagreement is a conversation in person, out of earshot.

WHEN A RADIO FAILS

It changes nothing. That is the point of rule 1.

- **One radio dies:** tell the Referee in person at the next dead ball, pull the earpiece so it does not squeal, and work on signals. Swap in the spare at the next time-out or quarter break.
- **Interference or another group on the channel:** the Referee moves the crew to the alternate at the next time-out or break between periods, in person, then runs a radio check.

- **Stuck button / hot mic:** check your own button first. Whoever has it, turn the radio off at the next dead ball.
- **The whole system is unreliable:** the Referee calls it off for the rest of the game. Radios off, signals only.

AFTER THE GAME

- **Radios off before you leave the field.** A live microphone walking past a bench is how private remarks become public.
- Nothing about the game goes on the radio once the final whistle has blown — that is for the locker room.
- Recharge or replace batteries that night, not the morning of the next game.

Reflects the 2026 NFHS rules year. Built from the 2025 NFHS Football Rules Book — Rule 1-3-7 (p. 18) and Table 1-7 (p. 26); the 2026 and 2027 NFHS Football Game Officials Manual — §1.1 Uniform, Accessories (p. 18) and §1.10 Game Official-to-Game Official Communication (pp. 35–36); FCC rules for the Family Radio Service, 47 CFR Part 95 Subparts A and B; KHSAA and MHSAA crew communication device guidelines. Last checked September 29, 2026. Confirm with the association before relying on this.