



## RADIO COMMUNICATIONS CHEAT SHEET

NATO Prowords • Phonetic Alphabet • GMRS / FRS / MURS / NOAA Frequencies

## NATO / MILITARY PROWORDS

## TRANSMISSION CONTROL

|                          |                                          |
|--------------------------|------------------------------------------|
| <b>This is</b>           | Precedes your own call sign              |
| <b>Over</b>              | Transmission finished, reply expected    |
| <b>Out</b>               | Conversation ended (initiator uses this) |
| <b>Break</b>             | Pause between parts of a long message    |
| <b>Wait</b>              | Short pause, I'll continue shortly       |
| <b>Wait, out</b>         | I must pause; I'll call back later       |
| <b>Standby</b>           | Hold — I will transmit shortly           |
| <b>Send your traffic</b> | Go ahead with your message               |
| <b>Nothing follows</b>   | End of report / no further traffic       |

## ACKNOWLEDGEMENT &amp; COMPLIANCE

|                     |                                  |
|---------------------|----------------------------------|
| <b>Roger</b>        | Message received / understood    |
| <b>Wilco</b>        | Roger + will comply              |
| <b>How copy?</b>    | Are you receiving me clearly?    |
| <b>Radio check</b>  | Request a signal-strength report |
| <b>Lima Charlie</b> | "Loud and Clear" (L.C.)          |

## REPETITION &amp; CORRECTION

|                               |                                             |
|-------------------------------|---------------------------------------------|
| <b>Say again</b>              | Repeat your last transmission               |
| <b>Words twice</b>            | Send every phrase/word two times            |
| <b>I spell</b>                | Following word will be spelled phonetically |
| <b>All after / all before</b> | Repeat only the part after/before a point   |
| <b>Correction</b>             | An error was made; correct version follows  |
| <b>Relay to</b>               | Pass this message on to another station     |
| <b>Message follows</b>        | A formal message/report is coming           |

## NEVER SAY ON THE NET

"Repeat" — in military use, calls for an artillery fire mission to be fired again. "Over and out" — contradicts itself (over = more to come, out = done). Use Roger instead of "copy that."

## SAMPLE CALL FORMAT

[Call sign of receiver], this is [your call sign], over. — wait for reply — give message — over (more to follow) or out (done, initiator only).

## BLUE REPORT (STATUS) FORMAT

Item 1, break, item 2, break, item 3. How copy, over? Pause 1–2 seconds after each "break" so the net can copy.

## NOAA WEATHER RADIO (VHF)

|            |             |            |             |
|------------|-------------|------------|-------------|
| <b>WX1</b> | 162.550 MHz | <b>WX5</b> | 162.450 MHz |
| <b>WX2</b> | 162.400 MHz | <b>WX6</b> | 162.500 MHz |
| <b>WX3</b> | 162.475 MHz | <b>WX7</b> | 162.525 MHz |
| <b>WX4</b> | 162.425 MHz |            |             |

## OTHER EMERGENCY / CALLING CHANNELS

|                         |                                                 |
|-------------------------|-------------------------------------------------|
| <b>CB Ch 9</b>          | 27.065 MHz — emergency/traveler calling         |
| <b>CB Ch 19</b>         | 27.185 MHz — common trucker/road channel        |
| <b>Marine VHF Ch 16</b> | 156.800 MHz — distress, safety & calling        |
| <b>Marine VHF Ch 9</b>  | 156.450 MHz — boater calling channel            |
| <b>Ham 2m calling</b>   | 146.520 MHz simplex (license required)          |
| <b>NOAA / EAS</b>       | Backbone of the national Emergency Alert System |

NOAA/NWS weather radio and the Emergency Alert System are always free to receive. GMRS and ham radio require an FCC license; FRS, MURS & CB do not.

## PHONETIC ALPHABET &amp; NUMBERS

|          |         |          |          |
|----------|---------|----------|----------|
| <b>A</b> | Alpha   | <b>N</b> | November |
| <b>B</b> | Bravo   | <b>O</b> | Oscar    |
| <b>C</b> | Charlie | <b>P</b> | Papa     |
| <b>D</b> | Delta   | <b>Q</b> | Quebec   |
| <b>E</b> | Echo    | <b>R</b> | Romeo    |
| <b>F</b> | Foxtrot | <b>S</b> | Sierra   |
| <b>G</b> | Golf    | <b>T</b> | Tango    |
| <b>H</b> | Hotel   | <b>U</b> | Uniform  |
| <b>I</b> | India   | <b>V</b> | Victor   |
| <b>J</b> | Juliett | <b>W</b> | Whiskey  |
| <b>K</b> | Kilo    | <b>X</b> | X-ray    |
| <b>L</b> | Lima    | <b>Y</b> | Yankee   |
| <b>M</b> | Mike    | <b>Z</b> | Zulu     |

## PRO-NUMBERS (SPOKEN FORM)

|          |        |          |        |
|----------|--------|----------|--------|
| <b>0</b> | ZE-RO  | <b>1</b> | WUN    |
| <b>2</b> | TOO    | <b>3</b> | TREE   |
| <b>4</b> | FOW-ER | <b>5</b> | FIFE   |
| <b>6</b> | SIX    | <b>7</b> | SEV-EN |
| <b>8</b> | AIT    | <b>9</b> | NIN-ER |

Numbers are spoken digit-by-digit, e.g. "650" = SIX-FIFE-ZERO. Decimal points are spoken as "DAY-SEE-MAL."

## GMRS / FRS CHANNELS (MHz)

| Ch | Freq     | Type     | Rep In | Ch | Freq      | Type     | Rep In   |
|----|----------|----------|--------|----|-----------|----------|----------|
| 1  | 462.5625 | FRS+GMRS | —      | 12 | 467.6625  | FRS only | —        |
| 2  | 462.5875 | FRS+GMRS | —      | 13 | 467.6875  | FRS only | —        |
| 3  | 462.6125 | FRS+GMRS | —      | 14 | 467.7125  | FRS only | —        |
| 4  | 462.6375 | FRS+GMRS | —      | 15 | 462.5500  | GMRS     | 467.5500 |
| 5  | 462.6625 | FRS+GMRS | —      | 16 | 462.5750  | GMRS     | 467.5750 |
| 6  | 462.6875 | FRS+GMRS | —      | 17 | 462.6000  | GMRS     | 467.6000 |
| 7  | 462.7125 | FRS+GMRS | —      | 18 | 462.6250  | GMRS     | 467.6250 |
| 8  | 467.5625 | FRS only | —      | 19 | 462.6500  | GMRS     | 467.6500 |
| 9  | 467.5875 | FRS only | —      | 20 | 462.6750* | GMRS     | 467.6750 |
| 10 | 467.6125 | FRS only | —      | 21 | 462.7000  | GMRS     | 467.7000 |
| 11 | 467.6375 | FRS only | —      | 22 | 462.7250  | GMRS     | 467.7250 |

\*Ch 20 (CTCSS 141.3 Hz) is the common GMRS calling/travel channel. Channels 1–7 are shared FRS/GMRS at reduced power; 8–14 are FRS-only, low power; 15–22 are GMRS-only (up to 50W) with matching repeater input frequencies 5 MHz above each output. GMRS requires a \$35 FCC license (covers immediate family); FRS is license-free.

## MURS CHANNELS (License-Free VHF)

| Ch | Frequency                 |
|----|---------------------------|
| 1  | 151.820 MHz               |
| 2  | 151.880 MHz               |
| 3  | 151.940 MHz               |
| 4  | 154.570 MHz ("Blue Dot")  |
| 5  | 154.600 MHz ("Green Dot") |

Frequencies per FCC Part 95 (GMRS/FRS/MURS). GMRS requires an FCC license (covers immediate family); FRS & MURS do not. Confirm current rules at fcc.gov before operating.