

TWO-WAY RADIO

All School District No. 27 buses are equipped with two-way radios. The two way radio is intended to provide instant communication between the driver and his/her dispatch office. It is an extremely valuable asset in the event of a problem or an emergency. There are Federal laws (Industry Canada) that apply to the use of two-way radios and every driver is expected to comply with them.

1. Profanity is strictly prohibited
2. Unauthorized use, cutting in on other transmissions, personal messages and general conversation are strictly prohibited
3. Use of a two-way vehicle radio by anyone other than the authorized driver (except in an emergency) is strictly prohibited

School District No. 27 has two radio repeaters, one on Mount Timothy and the other on Puntzi Mountain in the Chilcotin. Both use the same frequency (170.58). The two-way radios are also equipped with a truck-to-truck channel. Truck-to-truck is a local, short distance channel, general line of sight with no obstructions. Bus drivers should always use the repeater channel.

When on the repeater channel, if the microphone is keyed and released, a green light comes on momentarily as well as a short static sound. This means that the radio is working and ready to transmit.

To use the radio:

- Check to ensure volume level is set
- Hold microphone 3 to 5 inches from your mouth
- Activate microphone button – short pause before you talk
- Speak in your normal voice – do not yell
- Speak slower than normal with adequate pauses
- Be brief and to the point
- When finished speaking, take a short pause before releasing the microphone button so as not to chop of the last words



RADIO VOICE PROCEDURE

Operating a two way radio is an art in which personality plays an important part. Proper voice procedure training will provide radio operators with the basic knowledge of how to improve their skills in the use of two-way radio communication.

Even the best radio system can suffer from interference. Because of this it is possible that others can hear anything that is said, therefore it is of utmost importance that proper voice procedure is used to save time.

There are two basic considerations when talking on the air:

- **WHAT TO SAY** (Voice procedure)
- **HOW TO SAY IT** (Voice technique)

WHAT IS VOICE PROCEDURE?

Voice procedure is a set of rules designed to provide **SECURITY, ACCURACY** and **DISCIPLINE** when speaking on the radio. If you neglect these rules then it will be SAD.

SECURITY

- a) Think before you speak
- b) Use correct procedure
- c) Be brief

ACCURACY

The necessity for clear speech on a two-way radio cannot be over emphasized. Therefor the **RSVP** system should be used to enhance better voice procedure and technique.

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| R | RHYTHM | Adequate pauses |
| S | SPEED | Slower than usual conversation |
| V | VOLUME | Speak directly into the microphone |
| P | PITCH | The voice should be pitched at a higher level than for normal conversation |

DISCIPLINE

Radio discipline is the responsibility of every operator and should adhere to the following:

- a) Listen before you speak
- b) Use correct voice procedure
- c) Answer all calls promptly
- d) Keep the airways free of unnecessary talk
- e) Be brief and to the point

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PROWORDS

Prowords are used to indicate specific meaning that replaces abbreviated sentences or phrases. They are standard, easily pronounced words, which have been assigned special meanings and can speed up message handling on radio networks reducing the chance of an error being introduced into a message.

Standard Words and Phrases

Word or Phrase	Meaning
Affirmative	Normally used when a question is asked and the reply is YES
Break, Break,	Interruption to a transmission
Disregard	This transmission has been made in error - ignore
EMERGENCY, EMERGENCY	Only to be used when there is “grave or imminent danger to life” . Immediate assistance is required
Figures	Numbers to follow
Go ahead	I am ready to copy your message
I spell	Next word will be spelt out using the phonetic alphabet
I say again	I am repeating my transmission or portion requested
Negative	Normally used when a question is asked and the reply is NO
Out	End of transmission, no answer is required or expected
Over	Invitation to transmit
Roger	Message was received and understood. Can be used with the words over or out
Roger so far	Confirm parts of long message before continuing with rest of message
Say again	Repeat all of your last transmission
Say all after	Repeat all after a certain word or key phrase
Say all before	Repeat all before a certain word or key phrase
Standby	Wait for a short period and I will bet back to you

Sitrep	Means a situation report at your location
Wait over	Wait for a short period and I will get back to you
Wait out	The waiting period is longer than “wait over” I will call you as soon as possible
Wrong	Indicates an error has been made and the message will be repeated from the last correctly transmitted word

Phonetic Alphabet

Just as in normal conversations, when someone has difficulty understanding an unfamiliar word or name, the best way to get it across is to spell it.

Therefore the only difference over a two-way radio system is these words are spelled phonetically to avoid confusion.

Example: ETA should be spoken as – Echo Tango Alpha

Since many letters sound the same, phonetic alphabets have been developed to allow communicators to spell without confusion. The phonetic alphabet used by Hams is the same as used by the military services, aviation facilities and mariners worldwide.

	Phonetic	Spoken As		Phonetic	Spoken As
A	Alpha	AL FAH	N	November	NO VEM BER
B	Bravo	BRAH VOH	O	Oscar	OSS CAH
C	Charlie	CHAR LEE	P	Papa	PAH PAH
D	Delta	DELL TAH	Q	Quebec	BEH BECK
E	Echo	ECK OH	R	Romeo	ROW ME OH
F	Foxtrot	FOXS TROT	S	Sierra	SEE AIR RAH
G	Golf	GOLPH	T	Tango	TANG GO
H	Hotel	HOH TELL	U	Uniform	YOU NEE FORM
I	India	IN DEE AH	V	Victor	VIC TAH
J	Juliet	JEW LEE ETT	W	Whiskey	WISS KEY
K	Kilo	KEY LOH	X	X-ray	ECKS RAY
L	Lima	LEE MAH	Y	Yankee	YANK KEY
M	Mike	MIKE	Z	Zulu	ZOO LOO

SIGNAL REPORTING

THE R-S-T SYSTEM

The International Telecommunication Union (ITU) dictates the standard of reporting signal readability strength and tone. This system for HF operation has three scales for SSB operation, 1-5 for readability and 1-9 for strength and tone. The tone report is used only for Morse code operations.

Whenever an initial radio check call is made, the receiving station needs to inform the other station making the request how the receiving signal is being heard. To do this the following scale should be used.

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READABILITY

- 1 Unreadable
- 2 Barely readable some words now & then
- 3 Readable with considerable difficulty
- 4 Readable with practically no difficulty
- 5 Perfectly readable (Loud & Clear)

SIGNAL STRENGTH

- 1 Faint signals
- 2 Very weak signals
- 3 Weak signals
- 4 Fair signals
- 5 Fairly good signals
- 6 Good signals
- 7 Moderately strong signals
- 8 Strong signals
- 9 Extremely strong signals

INITIATING A CALL

Whenever you are using a radio for the first time, or there is doubt about the performance of your radio, the simplest check than can be done is what is known as a **“RADIO CHECK”**. The call should consist of the following:

- The call sign of the station being called
- The words **“THIS IS”**
- The call sign of the station calling
- The words **“RADIO CHECK”**
- The pro-word **“OVER”**

EXAMPLE:

6Y5RL **this is 6Y5AG radio check over**
6Y5AG **this is 6Y5RL you are 5 by 9 over**
6Y5RL **this is 6Y5AG roger out**

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SHARING SIDE ROADS WITH OTHER COMMERCIAL VEHICLES

There will be occasions when school buses will be sharing roads with active logging or mining trucks and low beds etc. Examples would be Beaver Valley Road, Spokin Lake Road, etc. These roads may be marked at their beginning with signage stating active logging as well as two-way radio frequencies.

School buses can have three frequencies installed into these two-way radios if and when required. If a school bus is using an active logging road, the driver is required to call their kilometres using the designated radio frequency. When entering an active road, the kilometres start at 0 and increase up (empty). When traveling towards a main road, kilometres will decrease down (loaded). Typical call would be "school bus kilometre 6 up empty" or "school bus kilometre 6 down loaded" in the direction of travel. School buses should not be in the scan mode if you are on a logging road.

If the school bus you are driving does not have a logging channel, you can wait at the entrance of the active logging road until a truck enters the road, then you could follow the truck as he would call the kilometres for you.

