

## 1.0 WHISTLE AND HORN SIGNAL RULES

On the railroad, there are many ways to send a message. Back in the old days, before radio, the train crews and railroad yard workers needed a way to "talk" at a distance. They used lights, flags and sounds.

The railroad used bells to let others know that the train was moving nearby. Trains ring their bells whenever they enter or leave a station, and whenever they pass a place where people are standing near the tracks. If a train had to be stopped, workers would place "torpedoes" on the tracks. They would be placed far enough away, so that the train could stop in time. Torpedoes were like fireworks. They popped as the train rolled over them. Hearing them, the engineer knew he had to stop.

The first chart has signals from the locomotive to the train men and workers alongside the tracks. The following are the required horn signals listed in the operating rules of most North American railroads, along with their meanings. Signals are illustrated by an "o" for short sounds, and "-" for longer sounds.

-- O -	Do this when you are coming to a "grade crossing". A grade crossing is where a road crosses the railroad tracks.
OOOO -	Fire alarm, to let workers near the tracks of a fire
Many short toots	To warn people, cattle and others to get off the tracks.
_____	Big long blasts, when getting near stations, junctions and railroad crossings. A railroad crossing is where tracks cross one another.

Sound with Whistle or Horn	What it means
O	Stop.
--	Go
- OOO	Flagman go to back of train.
----	Flagman return from south or west.
---- O	Flagman return from north or east.
---	When running, train parted ( that means some cars came unhooked) "The train came apart!"
OO	Answer to signals - this is tooted to say that you received the signal, and is like saying 'Yes, I heard you!'
OOO	When given a signal to back up, toot before going back.
OOOO	Call for signals "What am I supposed to do?"

Here are signals the conductor uses to talk with the engineer. The conductor rode at the back of the train, in the caboose. He used an air whistle or bell ringer to send messages to the engine. All of these sounds are short toots. You might notice that the same number of toots can have different meanings, if the train is running or standing still.

Sounds	What they mean
OO	If the train is standing, GO
OO	If the train is moving, STOP
OOO	If train is standing, GO BACK
OOO	If train is moving, stop at next station
OOOO	When train is standing, apply or release brakes
OOOO	When train is running, slow down
OOOOO	When train is standing, call in a flagman
OOOOO	When train is running, go faster!!!!
OOOOOO	When train is running, turn up the heat (the engine also heated the cars which people rode.)

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## 2.0 RAILROAD RADIO RULES

### 2.1 Transmitting

Any employee operating a radio must do the following:

- Before transmitting, listen long enough to make sure the channel is not being used.
- Give the required identification.
- Not proceed with further transmission until acknowledgment is received.

### 2.2 Required Identification

Employees transmitting or acknowledging a radio communication must begin with the required identification. The identification must include the following in this order:

\* For base or wayside stations:

- Name or initials of the railroad
- Name and location or other unique designation

\* For mobile units:

- Name or initials of the railroad
- Train name (number), engine number, or words that identify the precise mobile unit

If communication continues without interruption, repeat the identification every 15 minutes.

### Short Identification

After making a positive identification for switching, classification, and similar operations within a yard, fixed and mobile units may use a short identification after the initial transmission and acknowledgment.

### 2.3 Repetition

An employee who receives a transmission must repeat it to the person transmitting the message, except when the communication:

- Concerns switching operations.
- Is a recorded message from an automatic alarm device.

or

- Is general and does not contain any information, instruction, or advice that could affect the safety of a railroad operation.

### 2.4 Over

The employee transmitting must say, "Over" to the employee receiving the transmission when the communication is complete and a response is expected.

### 2.5 Out

The employee transmitting must give the required identification and say, "Out" to the employee receiving the transmission when the communication is complete and no response is expected.

### 2.6 Communication Not Understood or Incomplete

An employee who does not understand a radio communication or who receives a communication that is incomplete must not act upon the communication and must treat it as if it was not sent.

**EXCEPTION:** An employee who receives information that may affect the safety of employees or the public or cause damage to property must take the safe course. When necessary, stop movement until the communication is understood.

### 2.7 Monitoring Radio Transmissions

Radios in attended base stations or mobile units must be turned on to the appropriate channel with the volume loud enough to receive communications. Employees attending base stations or mobile units must acknowledge all transmissions directed to the station or unit.

### 2.8 Acknowledgment

An employee receiving a radio call must acknowledge the call immediately unless doing so would interfere with safety.

### 2.9 Misuse of Radio Communications

Employees must not use radio communication to avoid complying with any rule.

### 2.10 Emergency Calls

Emergency calls will begin with the words "Emergency," "Emergency," "Emergency." These calls will only be used to cover initial reports of derailments, collisions, storms, washouts, fires, track obstructions, property damage, or injury to employees or the public. Emergency calls must contain as much complete information on the incident as possible.

All employees must give absolute priority to an emergency communication. Unless they are answering or aiding the emergency call, employees must not send any communication until they are certain no interference will result.

### **2.11 Prohibited Transmissions**

Employees must not transmit a false emergency or an unnecessary or unidentified communication. Employees must not use indecent language over the radio. Employees must not reveal the existence, contents, or meaning of any communication (except emergency communications) to persons other than those it is intended for, or those whose duties may require knowing about it.

### **2.12 Fixed Signal Information**

Employees must not use the radio to give information to a train or engine crew about the name, position, aspect, or indication displayed by a fixed signal, unless the information is given between members of the same crew or the information is needed to warn of an emergency.

### **2.13 In Place of Hand Signals**

When the radio is used instead of hand signals, information must include the direction and distance to be traveled.

Movement must stop within half of the distance specified unless additional instructions are received.

### **2.14 Transmitting Track Warrants and Track Bulletins**

When transmitted by radio, track warrants and track bulletins must be transmitted according to applicable operating rules and the following:

- The train dispatcher must state that a track warrant or track bulletin will be transmitted.
- The employee must inform the train dispatcher when ready to copy. An employee operating the controls of a moving engine may not copy track warrants or track bulletins. In addition, track warrants or track bulletins must not be transmitted to the crew of a moving train if the conductor, engineer, or train dispatcher feels that the transmission could adversely affect the safe operation of the train.
- The employee receiving track warrants or track bulletins must copy them in writing using the format outlined in the operating rules.

### **2.15 Phonetic Alphabet**

If necessary, a phonetic alphabet (Alpha, Bravo, Charlie, etc.) will be used to pronounce clearly any letter used as an initial, except initial letters of railroads.

### **2.16 Assigned Frequencies**

The railroad must authorize any radio transmitters used in railroad service. Radio transmitters must operate on frequencies the Federal Communications Commission assigns the railroad. Employees are prohibited from using other transmitters or railroad frequencies not assigned to that particular territory.

### **2.17 Radio Testing**

Radios used in train operation, outside of a yard, must be tested at the point where the train is originally made up.

Engineers and conductors must test the radios at least once during each tour of duty to verify the radios are working.

The radio test must include an exchange of voice transmissions with another radio. The test must confirm the quality of the radio's transmission.

### **2.18 Malfunctioning Radio**

Malfunctioning radios must not be used. As soon as possible, notify each crew member and the train dispatcher or other affected employees that the radio is not working.

### **2.19 Blasting Operations**

Employees must not operate radio transmitters located less than 250 feet from blasting operations.

### **2.20 Internal Adjustments**

Employees are prohibited from making internal adjustments to a railroad radio unless they are specifically authorized by the FCC or hold a current Certified Technicians Certificate. Employees authorized to make adjustments must carry their FCC operator license, Certified Technicians Certificate, or verification card while on duty.