

Federal Railroad Administration, DOT

Pt. 220, Note

footnote 1 to appendix A of part 220. The amendment could not be incorporated because footnote 1 to appendix A of part 220 in 49 CFR parts 200 to 399, revised as of Oct. 1, 1997, does not exist.

APPENDIX B TO PART 220—RECOMMENDED PRONUNCIATION OF NUMERALS

To distinguish numbers from similar sounding words, the word "figures" should be used preceding such numbers. Numbers should be pronounced as follows:

Number	Spoken
0	ZERO.
1	WUN.
2	TOO.
3	THUH-REE.
4	FO-WER.
5	FI-YIV.
6	SIX.
7	SEVEN.

Number	Spoken
8	ATE.
9	NINER.

(The figure ZERO should be written as "0" to distinguish it from the letter "O". The figure ONE should be underlined to distinguish it from the letter "I". When railroad rules require that numbers be spelled, these principles do not apply.)

The following examples illustrate the recommended pronunciation of numerals:

Number	Spoken
44	FO-WER FO-WER.
500	FI-YIV HUNDRED.
1000	WUN THOUSAND.
1600	WUN SIX HUNDRED.
14899	WUN FO-WER ATE NINER NINER.
20.3	TOO ZERO DECIMAL THUH-REE.

APPENDIX C TO PART 220—SCHEDULE OF CIVIL PENALTIES¹

Section	Violation	Willful violation
220.9 Requirements for trains	\$5,000	\$7,500
220.11 Requirements for roadway workers	5,000	7,500
220.21 Railroad Operating rules; radio communications.		
(a)	5,000	7,500
(b)	2,500	5,000
220.23 Publication of radio information	2,500	5,000
220.25 Instruction of employees	5,000	7,500
220.27 Identification	1,000	2,000
220.29 Statement of letters and numbers	1,000	2,000
220.31 Initiating a transmission	1,000	2,000
220.33 Receiving a transmission	1,000	2,000
220.35 Ending a transmission	1,000	2,000
220.37 Voice test	5,000	7,500
220.39 Continuous monitoring	2,500	5,000
220.41 [Reserved]		
220.43 Communication consistent with the rules	2,500	5,000
220.45 Complete communications	2,500	5,000
220.47 Emergencies	2,500	5,000
220.49 Switching, backing or pushing	5,000	7,500
220.51 Signal indications	5,000	7,500
220.61 Radio transmission of mandatory directives	5,000	7,500

¹ A penalty may be assessed against and only for a willful violation. The Administrator reserves the right to assess a penalty of up to \$22,000 for any violation where circumstances warrant. See 49 CFR part 209, appendix A.

EFFECTIVE DATE NOTE: At 63 FR 47195, Sept. 4, 1998, part 220 was revised, effective Jan. 4, 1999. For the convenience of the user, the text remaining in effect until Jan. 4, 1999 is set forth as follows:

PART 220—RADIO STANDARDS AND PROCEDURES

Subpart A—General

- Sec.
- 220.1 Scope.
- 220.3 Application.
- 220.5 Definitions.

220.7 Penalty.

Subpart B—Radio Procedures

- 220.21 Railroad operating rules; radio communications; recordkeeping.
- 220.23 Publication of radio information.
- 220.25 Instruction of employees.
- 220.27 Identification.
- 220.29 Statement of letters and numbers.
- 220.31 Initiating a transmission.
- 220.33 Receiving a transmission.
- 220.35 Ending a transmission.
- 220.37 Voice test.
- 220.39 Continuous monitoring.

Pt. 220, Note

49 CFR Ch. II (10–1–98 Edition)

- 220.41 Notification on failure of train radio.
- 220.43 Communication consistent with rules.
- 220.45 Communication must be complete.
- 220.47 Emergencies.
- 220.49 Switching, backing or pushing.
- 220.51 Signal indications.

Subpart C—Train Orders

- 220.61 Transmission of train orders by radio.
- APPENDIX A TO PART 220—RECOMMENDED PHONETIC ALPHABET
- APPENDIX B TO PART 220—RECOMMENDED PRONUNCIATION OF NUMERALS
- APPENDIX C TO PART 220—SCHEDULE OF CIVIL PENALTIES

AUTHORITY: 49 U.S.C. 20103, 20107 and 49 CFR 1.49.

SOURCE: 42 FR 5065, Jan. 27, 1977, unless otherwise noted.

Subpart A—General

§ 220.1 Scope.

This part prescribes minimum requirements governing the use of radio communications in connection with railroad operations. The term "radio communications" refers to the transmission and reception of voice communications by radio. So long as these minimum requirements are met, railroads may adopt additional or more stringent requirements.

§ 220.3 Application.

(a) Except as provided in paragraph (b) of this section, this part applies to railroads that operate trains or other rolling equipment on standard gage track which is part of the general railroad system of transportation.

(b) This part does not apply to:

(1) A railroad that operates only on track inside an installation which is not part of the general railroad system of transportation; or

(2) Rapid transit operations in an urban area that are not connected with the general railroad system of transportation.

[42 FR 5065, Jan. 27, 1977, as amended at 53 FR 28600, July 28, 1988]

§ 220.5 Definitions.

As used in this part, the term:

(a) *Employee* means any person who is authorized by a railroad to use its radio facilities in connection with railroad operations.

(b) *Railroad operation* means any movement of a train, engine, on-track equipment, or track motor car, single or in combination with other equipment, on the track of a railroad.

(c) *Train Order* means any mandatory directive issued as authority for the conduct of

a railroad operation which is transmitted by radio.

(d) *Division headquarters* means the location designated by the railroad where a high-level operating manager (e.g., a superintendent, division manager, or equivalent), who has jurisdiction over a portion of the railroad, has an office.

(e) *System headquarters* means the location designated by the railroad as the general office for the railroad system.

[42 FR 5065, Jan. 27, 1977, as amended at 59 FR 43071, Aug. 22, 1994]

§ 220.7 Penalty.

Any person (an entity of any type covered under 1 U.S.C. 1, including but not limited to the following: a railroad; a manager, supervisor, official, or other employee or agent of a railroad; any owner, manufacturer, lessor, or lessee of railroad equipment, track, or facilities; any independent contractor providing goods or services to a railroad; and any employee of such owner, manufacturer, lessor, lessee, or independent contractor) who violates any requirement of this part or causes the violation of any such requirement is subject to a civil penalty of at least \$500 and not more than \$11,000 per violation, except that: Penalties may be assessed against individuals only for willful violations, and, where a grossly negligent violation or a pattern of repeated violations has created an imminent hazard of death or injury to persons, or has caused death or injury, a penalty not to exceed \$22,000 per violation may be assessed. Each day a violation continues shall constitute a separate offense. See appendix C to this part for a statement of agency civil penalty policy.

[53 FR 28600, July 28, 1988, as amended at 53 FR 52930, Dec. 29, 1988; 63 FR 11621, Mar. 10, 1998]

Subpart B—Radio Procedures

§ 220.21 Railroad operating rules; radio communications; recordkeeping.

(a) After August 1, 1977, the operating rules of each railroad with respect to radio communications shall conform with the requirements of this part.

(b) On or after November 21, 1994, or 30 days before commencing to use radio communications in connection with railroad operations, whichever is later, each railroad shall retain one copy of its current operating rules with respect to radio communications, and of each amendment to these rules, at the locations prescribed in paragraphs (b) (1) and (2) of this section. These records shall be made available to representatives of the Federal Railroad Administration for inspection and copying during normal business hours.

(1) Each Class I railroad, each Class II railroad, the National Railroad Passenger Corporation, and each railroad providing commuter service in a metropolitan or suburban area shall retain such rules at each of its division headquarters and at the system headquarters of the railroad; and

(2) Each Class III railroad and any other railroad subject to this part but not subject to paragraph (b)(1) of this section shall retain such rules at the system headquarters of the railroad.

[42 FR 5065, Jan. 27, 1977, as amended at 59 FR 43072, Aug. 22, 1994]

§ 220.23 Publication of radio information.

Each railroad shall designate its territory where radio base stations are installed, where wayside stations may be contacted, and designate appropriate radio channels by publishing them in a timetable or special instruction. The publication shall indicate the periods during which base and wayside radio stations are attended or in operation.

§ 220.25 Instruction of employees.

Each employee who is authorized to use a radio in connection with a railroad operation, shall be:

(a) Provided with a copy of the railroad's operating rules governing the use of radio communication in a railroad operation.

(b) Instructed in the proper use of radio communication as part of the program of instruction prescribed in § 217.11 of this chapter.

§ 220.27 Identification.

(a) Except as provided in paragraph (c) of this section, the identification of each wayside, base or yard station shall include at least the following minimum elements, stated in the order listed:

(1) Name of railroad. An abbreviated name or initial letters of the railroad may be used where the name or initials are in general usage and are understood in the railroad industry;

(2) Name of office or other unique designation of the station; and

(3) Location of the station.

(b) Except as provided in paragraph (c) of this section, the identification of each mobile station shall consist of the following elements, stated in the order listed:

(1) Name of the railroad. An abbreviated name or initial letters of the railroad may be used where the name or initial letters are in general usage and are understood in the railroad industry;

(2) Train name (number), if one has been assigned, or other appropriate unit designation; and

(3) The word *engine*, *caboose*, *motorcar*, *pakset* or other word which indicates to the listener the precise mobile transmitting sta-

tion, unless identical to the requirement of paragraph (b)(2) of this section.

(c) If positive identification is achieved in connection with switching, classification, and similar operations wholly within a yard, fixed and mobile units may use short identification after the initial transmission and acknowledgement consistent with applicable Federal Communications Commission regulations governing "Station Identification".

§ 220.29 Statement of letters and numbers.

(a) If necessary for clarity, a phonetic alphabet shall be used to pronounce any letter used as an initial, except initial letters of railroads. See appendix A of this part for the recommended phonetic alphabet.

(b) A word which needs to be spelled for precision or clarity shall first be pronounced, and the word shall then be spelled. If necessary, the word shall be spelled again, using a phonetic alphabet.

(c) Numbers shall be spoken by digit, except that exact multiples of hundreds and thousands may be stated as such. A decimal point shall be indicated by the word "decimal". (See appendix B to this part, for a recommended guide to the pronunciation of numbers.)

§ 220.31 Initiating a transmission.

Before transmitting by radio, an employee shall:

(a) Listen to insure that the channel on which he intends to transmit is not already in use;

(b) Identify his station in accordance with the requirements of § 220.27; and

(c) Verify that he has made radio contact with the person or station with whom he intends to communicate by listening for an acknowledgement. If the station acknowledging his transmission fails to identify itself properly, the employee shall require a proper identification before proceeding with the transmission.

§ 220.33 Receiving a transmission.

(a) Upon receiving a radio call from another station, an employee shall promptly acknowledge the call, identifying his station in accordance with the requirements of § 220.27 and stand by to receive. An employee need not attend the radio, however, if this would interfere with other immediate duties relating to the safety of railroad operations.

(b) An employee shall acknowledge receipt of all transmissions directed to him or his station.

(c) An employee who receives a transmission shall repeat it to the transmitting party unless the communication:

(1) Relates to yard switching operations;

(2) Is a recorded message from an automatic alarm device; or

(3) Is general in nature and does not contain any information, instruction or advice

which could affect the safety of a railroad operation.

§ 220.35 Ending a transmission.

(a) At the close of each transmission to which a response is expected, the transmitting employee shall say “over” to indicate to the receiving employee that the transmission is ended.

(b) At the close of each transmission to which no response is expected, the transmitting employee shall state his identification followed by the word “out” to indicate to the receiving employee that the exchange of transmissions is complete.

§ 220.37 Voice test.

(a) Each radio which is used in connection with a railroad operation outside yard limits shall be tested at the point where the train is originally made up. At least once during each tour of duty, the engineer and conductor shall be responsible for the testing of the radio to verify that the radio is operating properly on the engine and caboose. The tests shall consist of an exchange of voice transmissions with another station. The other station shall advise the station conducting the test of the quality and readability of its transmission.

(b) Any radio found not to be functioning properly shall be removed from service until it has been repaired.

(c) When a radio is removed from service, each crew member of the train and the train dispatcher or other employee designated by the railroad shall be so notified.

§ 220.39 Continuous monitoring.

Engine and caboose radios must be turned on to the appropriate channel as designated in § 220.23 with the volume adjusted to receive communications while the engine or caboose is manned.

§ 220.41 Notification on failure of train radio.

The failure of an engine or caboose radio en route shall be reported as soon as practicable to the train dispatcher or other employee designated by the railroad by any alternate means of communication available.

§ 220.43 Communication consistent with rules.

Radio communication may not be used in connection with a railroad operation in a manner which conflicts with the requirements of this part 220, Federal Communication Commission regulations or the railroad's operating rules. The use of citizen band radios for railroad operating purposes is prohibited.

§ 220.45 Communication must be complete.

Any radio communication which is not fully understood or completed in accordance with the requirements of part 220 and the operating rules of the railroad, shall not be acted upon and shall be treated as though not sent.

§ 220.47 Emergencies.

(a) An emergency transmission shall be preceded by the word “emergency”, repeated three times. An emergency transmission shall have priority over all other transmissions and the frequency or channel shall be kept clear of non-emergency traffic for the duration of the emergency transmission.

(b) Emergency transmissions shall be used to report derailments, collisions, storms, wash-outs, fires, obstructions to tracks, and other hazardous conditions which could result in death or injury, damage to property or serious disruption of railroad operations. Emergency transmissions shall describe as completely as possible the nature, degree and location of the hazard.

§ 220.49 Switching, backing or pushing.

When radio communication is used in lieu of hand signals in connection with the switching, backing or pushing of a train, engine, or car, the employee directing the movement shall give complete instructions or keep in continuous radio contact with the employees receiving the instructions. When backing or pushing a train, engine or cars, the distance of the movement must be specified, and the movement must stop in one-half the remaining distance unless additional instructions are received. If the instructions are not understood or continuous radio contact is not maintained, the movement shall be stopped immediately and may not be resumed until the misunderstanding has been resolved, radio contact has been restored, or communication has been achieved by hand signals or other procedures in accordance with the operating rules of the railroad.

§ 220.51 Signal indications.

(a) No information may be given by radio to a train or engine crew about the position or aspect displayed by a fixed signal. However, radio may be used by a train crew member to communicate information about the position or aspect displayed by a fixed signal to other members of the same crew.

(b) Except as provided in the railroad's operating rules, radio communication may not be used to convey instructions which would have the effect of overriding the indication of a fixed signal in automatic block territory.

Subpart C—Train Orders

§220.61 Transmission of train orders by radio.

(a) Train orders may be transmitted by radio only when authorized by railroad's operating rules and must be transmitted in accordance with the railroad's operating rules and the requirements of this part 220.

(b) The procedures for transmission of train orders by radio are as follows:

(1) The dispatcher or operator shall call the addresses of the train order and state his intention to transmit the train order.

(2) Before the train order is transmitted, the employee to receive and copy the train order shall state his name, identification or call sign, location, and that he is prepared to receive a train order. Train orders may not be received and copied by an employee operating the controls on an engine of a moving train. Train orders may not be transmitted to the crew of a moving train when, in the judgment of either the conductor, the engineer, or the train dispatcher, the train order cannot be received and copied without impairing the safe operation of their Train.

(3) Train orders shall be copied in writing by the receiving employee in the format prescribed in the railroad's operating rules.

(4) After the train order has been received and copied, it shall be immediately repeated in its entirety. After verifying the accuracy of the repeated train order, the dispatcher shall then state "complete", the time, and the initials of the employee designated by the railroad. Employees copying train orders must then acknowledge by repeating "complete" and the time.

(5) Before a train order is acted upon, both the conductor and engineer must have a written copy of the train order and make certain that the train order is read and understood by other members of the crew.

(6) A train order which has not been completed or which does not comply with the requirements of the railroad's operating rules, may not be acted upon and must be treated as though not sent. Information contained in a train order may not be acted upon by persons other than those to whom the train order is addressed.

[42 FR 5065, Jan. 27, 1977, as amended at 42 FR 12176, Mar. 3, 1977]

APPENDIX A TO PART 220—RECOMMENDED PHONETIC ALPHABET

- A—ALFA
- B—BRAVO
- C—CHARLIE
- D—DELTA
- E—ECHO
- F—FOXTROT
- G—GOLF
- H—HOTEL

- I—INDIA
- J—JULIET
- K—KILO
- L—LIMA
- M—MIKE
- N—NOVEMBER
- O—OSCAR
- P—PAPA
- Q—QUEBEC
- R—ROMEO
- S—SIERRA
- T—TANGO
- U—UNIFORM
- V—VICTOR
- W—WHISKEY
- X—XRAY
- Y—YANKEE
- Z—ZULU

The letter "ZULU" should be written as "Z" to distinguish it from the numeral "2".

APPENDIX B TO PART 220—RECOMMENDED PRONUNCIATION OF NUMERALS

To distinguish numbers from similar sounding words, the word "figures" should be used preceding such numbers. Numbers should be pronounced as follows:

Number	Spoken
0	0
1	WUN
2	TOO
3	THUH-REE-
4	FO-WER
5	FI-YIV
6	SIX
7	SEVEN
8	ATE
9	NINER

(The figure ZERO should be written as "0" to distinguish it from the letter "O". The figure ONE should be underlined to distinguish it from the letter "I". When railroad rules require that numbers be spelled, these principles do not apply.)

The following examples illustrate the recommended pronunciation of numerals:

Number	Spoken
44	FO-WER FO-WER
500	FI-YIV HUNDRED
1000	WUN THOUSAND
1600	WUN SIX THOUSAND
14899	WUN FO-WER ATE NINER NINER
20.3	TOO ZERO DECIMAL THUH-REE

APPENDIX C TO PART 220—SCHEDULE OF CIVIL PENALTIES ¹

Section	Violation	Willful violation
220.21 Railroad Operating rules; radio communications:		
(a)	\$5,000	\$7,500

APPENDIX C TO PART 220—SCHEDULE OF CIVIL PENALTIES¹—Continued

Section	Violation	Willful violation
(b)	2,500	5,000
220.23 Publication of radio information	2,500	5,000
220.25 Instruction of employees	5,000	7,500
220.27 Identification	1,000	2,000
220.29 Statement of letters and numbers	1,000	2,000
220.31 Initiating a transmission	1,000	2,000
220.33 Receiving a transmission	1,000	2,000
220.35 Ending a transmission	1,000	2,000
220.37 Voice test	5,000	7,500
220.39 Continuous monitoring	2,500	5,000
220.41 Notification on failure of train radio	2,500	5,000
220.43 Communication consistent with the rules	2,500	5,000
220.45 Complete communications	2,500	5,000
220.47 Emergencies	2,500	5,000
220.49 Switching, backing or pushing	5,000	7,500
220.51 Signal indications	5,000	7,500
220.61 Transmission of train orders by radio	5,000	7,500

¹ A penalty may be assessed against and only for a willful violation. The Administrator reserves the right to assess a penalty of up to \$22,000 for any violation where circumstances warrant. See 49 CFR part 209, appendix A.

[53 FR 52930, Dec. 29, 1988, as amended at 63 FR 11621, Mar. 10, 1998]

PART 221—REAR END MARKING DEVICE—PASSENGER, COMMUTER AND FREIGHT TRAINS

Subpart A—General

- Sec.
- 221.1 Scope.
- 221.3 Application.
- 221.5 Definitions.
- 221.7 Civil penalty
- 221.9 Waivers.
- 221.11 State regulation.

Subpart B—Marking Devices

- 221.13 Marking device display.
- 221.14 Marking devices.
- 221.15 Marking device inspection.
- 221.16 Inspection procedure.
- 221.17 Movement of defective equipment.

APPENDIX A TO PART 221—PROCEDURES FOR APPROVAL OF REAR END MARKING DEVICES

APPENDIX B TO PART 221—APPROVED REAR END MARKING DEVICES

APPENDIX C TO PART 221—SCHEDULE OF CIVIL PENALTIES

AUTHORITY: 49 U.S.C. 20103, 20107 and 49 CFR 1.49.

SOURCE: 42 FR 2321, Jan. 11, 1977, unless otherwise noted.

Subpart A—General

§221.1 Scope.

This part prescribes minimum requirements governing highly visible marking devices for the trailing end of the rear car of all passenger, commuter and freight trains. So long as these minimum requirements are met, railroads may adopt additional or more stringent requirements for rear end marking devices.

§221.3 Application.

(a) Except as provided in paragraph (b) of this section, this part applies to passenger, commuter and freight trains when operated on a standard gage main track which is part of the general railroad system of transportation.

(b) This part does not apply to:

- (1) A railroad that operates only trains consisting of historical or antiquated equipment for excursion, educational, or recreational purposes;
- (2) A train that operates only on track inside an installation which is not part of the general railroad system of transportation;
- (3) Rapid transit operations in an urban area that are not connected with the general railroad system of transportation.
- (4) A railroad that operates only one train at any given time.

[42 FR 2321, Jan. 11, 1977, as amended at 53 FR 28600, July 28, 1988]

§221.5 Definitions.

As used in this part:

- (a) *Train* means a locomotive unit or locomotive units coupled, with or without cars, involved in a railroad operation conducted on a main track. It does not include yard movements.
- (b) *Commuter train* means a short haul passenger train operating on track which is part of the general railroad system of transportation, within an urban, suburban or metropolitan area. It includes a passenger train provided by an instrumentality of a State or political subdivision thereof.