# Fourteen RRs Adopt New Operating Code

**Fourteen western railroads have adopted a new consolidated code of operating rules. The 232-page book represents the first major upgrading of the rules since 1945 for eight of the roads. The six other railroads have adopted the consolidated code for the first time.**

● Improvements in technology, particularly dieselization and increased use of CTC and train radio, account for many of the changes in the new code. New sections have been added concerning CTC (**Rules 265–273**) and train radio (**Rules 400–417**). One of the major changes is to the effect that the job of fireman is not recognized. For example:

**Rule 204** now provides that engineers must show copies of orders and clearances "to members of the crew on the engine." The 1945 code specified "firemen and when practicable . . . forward trainmen."

**Rule 211,** pertaining to Clearance Form A, takes a similar slant in referring to "members of the crew" instead of "firemen and trainmen."

**New Rule 803** combines responsibility of enginemen and trainmen in observing signals, maintaining safety lookout, keeping abreast of orders. A new paragraph provides that: "When conditions or signals require that the train be stopped or speed of train be reduced, and the engineer or conductor fails to take proper action to do so, or should the engineer become incapacitated, other members of the crew must take immediate action to stop the train."

The 14 railroads include the Milwaukee; Great Northern; Northern Pacific; Union Pacific (Oregon division); Soo Line; Minneapolis & St. Louis; Davenport, Rock Island & North Western; Des Moines Union; Duluth, South Shore & Atlantic; Minneapolis, Northfield & Southern; Minnesota Transfer; St. Paul Union Depot; Spokane International, and Spokane, Portland & Seattle.

Rules pertaining to opposing and following movements, centralized traffic control and radio usage are quoted in the following text.

## Rules Governing Opposing and Following Movement of Trains by Block Signals

**261.** On portions of the railroad, and on designated tracks so specified in the time-table, trains will be governed by block signals, whose indications will supersede the superiority of trains for both opposing and following movements on the same track.

**263.** The train dispatcher must be advised in advance of any known condition that will delay the train or prevent it from making usual speed.

**264.** Except as affected by Rule 261, all Block Signal Rules and Operating Rules remain in effect.

## Centralized Traffic Control System Rules

**Note.**—Centralized Traffic Control System Rules will be used only in CTC territory specified in the time-table or in Special Instructions.

**265.** Rules 261 to 264, inclusive, apply in CTC territory and, except as affected by Rules 261 to 273, inclusive, all other Block Signal Rules, Interlocking Rules and Operating Rules remain in effect.

**266.** Movement of trains and engines will be supervised by the train dispatcher, who may also operate the CTC control machine.

When the CTC control machine is operated by other than the train dispatcher, the train dispatcher will issue the necessary instructions to the control operator.

**267.** When movement is entirely within CTC limits, sections and extra trains may be authorized by clearance instead of by train order. For example, clearance designating a section must read, "First 3 Green Signals," "Second 3 No Signals," and clearance designating an extra train must read, "Extra 436 west."

Trains or engines must not enter CTC territory unless the governing signal displays a proceed indication or authority is obtained from the control operator.

**268.** Trains or engines must not foul or enter the main track or a controlled siding at hand operated switches not equipped with electric locks without first obtaining authority from the control operator.

**269.** When a train or engine has been stopped by a Stop indication, if no conflicting movement is evident, a member of the crew must immediately communicate with the control operator, identify himself, his train and location, and be governed by instructions received. The instructions must be repeated by the employee receiving them to insure correct understanding. Before proceeding, Rule 275 must be complied with.

When the train dispatcher knows there is no opposing train or engine movement involved, he may authorize the train or engine to proceed in the following form: "You may proceed at restricted speed to the next signal." If the train dispatcher does not positively know there is no opposing train or engine movement involved, he may authorize the train or engine to proceed in the following form: "You may proceed under flag protection to the next clear or approach signal." When flagging from a Stop signal, train must wait ten (10) minutes after flagman has started.

**269(A).** When stopped by a Stop indication and communication has failed, train or engine must not proceed, except when not standing between Stop signals at a station, train or engine must move forward under flag protection to a point where they will be between Stop signals at a station, clearing main track when practicable, complying with Rule 275. Further movement must not be made except on signal indication or until authority is received from control operator.

**270.** If any part of a train or engine over-runs a Stop indication, front of train or engine must be protected immediately as prescribed by Rule 99 and member of crew must communicate with control operator and be governed by his instructions.

**271.** Within CTC limits, trains or engines may occupy a track or tracks within specified limits and between specified times to perform switching or other work when authorized to do so by the control operator in the following form: "(train or engine) may use (track or tracks) between ___ and ___ (or at ___) ___ m until ___ m."

When requesting track and time limits, conductor will give his name, location, train or engine number, and specify time and work limits and track or tracks to be used. When such authority is granted, the instructions must be repeated to the control operator. No movement may be made under this rule until the engineer has received and understands the track and time limits granted.

After the train or engine has entered the specified limits, the control operator must block all signal and switch levers controlling movements into the specified limits and must not permit any other train or engine to enter the limits during the period track and time limits are in

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effect. Blocks must not be removed until track and time limits have expired unless conductor reports the train or engine clear of the track or tracks specified or work completed.

During the period track and time limits are authorized, the track or tracks specified may be used in either direction without flag protection. This does not modify requirements for proper observance of signal indications.

Trains and engines must be clear of the track or tracks specified or work completed, switches restored to normal position before expiration of the time specified, and control operator so advised. If not clear by the time specified, protection must be provided as prescribed by Rule 99. If additional time is required, authority must be secured from control operator before previously authorized time expires.

When two or more trains or engines are given the same or overlapping track and time limits, the control operator must inform the conductor of each train or engine of the fact and such trains or engines must protect against each other and move at restricted speed within such limits.

**272.** When an employee's call light is illuminated, any employee observing it, except those on moving trains, must immediately communicate with the control operator.

**273.** When CTC operation is interrupted or suspended trains and engines must be governed by instructions from the control operator or proper officer.

## Dual Control Switches

**275.** When a train or engine is stopped by a signal governing movement over a dual control switch, if no conflicting movement is evident, a member of the crew must immediately communicate with the train dispatcher or operator and be governed by his instructions. Such instructions must include information as to the route to be used. The instructions must be repeated to insure correct understanding.

When authorized to proceed, or when unable to communicate with the train dispatcher or operator, movement must not be made until after selector lever has been taken out of "power" position and placed in "hand" position. Hand throw lever must be operated until switch points are seen to move with the movement of hand throw lever. Switch must then be lined for the route to be used. Selector lever may be restored to "power" position and locked as soon as leading wheels of engine or car have moved onto the switch points.

**275 (A).** When necessary to perform switching over dual control switch, the switch may be operated manually by a member of the crew after authority to do so has been obtained from the train dispatcher or operator. The period of time the switch may be used must be clearly stated and understood.

Selector lever must be placed in "hand" position and left in that position until all movements over the switch have been completed. Hand throw lever must be operated until switch points are seen to move with the movement of the hand throw lever. Indications of stop signals governing movements over the switch may be considered suspended while selector lever is in "hand" position, but movements must be made at restricted speed.

After final movement has been made over the switch, selector lever must be restored to "power" position, locked and train dispatcher or operator notified.

## Electric Locked Switches

**280.** Instructions for operation of electric locks are posted at or near electric lock and must be complied with.

**281.** When indication is received showing lock has released, lock and switch may be operated and train or engine may proceed without waiting three minutes as required by Rule 513.

**282.** Authority to use an electric locked switch which is under control of the control operator, must be given verbally to member of crew by control operator. The period of time the switch and track may be used and designated limits must be clearly stated and understood.

**283.** Seal on emergency release of electric lock must not be broken, or emergency release operated, without authority from the train dispatcher or control operator, except when communication has failed.

When necessary to release electric lock by use of emergency release, and movement is to be made to a main track, member of crew must wait three (3) minutes after release has been operated before changing main track switch. Train or engine may then proceed being governed by signal indication, or where there is no signal, when preceded by a flagman to the next Clear or Approach signal.

Train or engine must wait ten (10) minutes after flagman has started.

When release seal is broken or found broken or missing, report must be made promptly to the superintendent, and the control operator.

## Railroad Radio Rules
### General

The following rules and requirements cover use of railroad radio systems, and govern employees using such systems.

**400 (A).** Definition: A railroad radio communication system is one employing radio for the transmission of intelligence between moving equipment, between moving equipment and a fixed point, or between fixed points.

**400 (B).** Radio communication systems are under the jurisdiction of the Federal Communications Commission. The railroad company and its employees are governed by the Commission's operating rules. Violation is a federal offense for which severe penalties are provided.

**400 (C).** In order to operate a radio transmitting set, a railroad employee must read and study the following rules and pass an examination thereon. Such examinations will be given by railroad examiners.

### Operating Rules.

**401.** All employees, except those specifically authorized to do so, are prohibited from making any adjustments to a railroad radio set. Employees so authorized must carry their FCC operating license or verification card when on duty. If it appears that a radio transmitter is not operating properly, its use shall be discontinued and the superintendent notified as soon as possible.

**402.** No employee shall knowingly transmit any false distress communication, any unnecessary, irrelevant or unidentified communication, nor utter any obscene, indecent or profane language via radio.

**403.** No employee shall divulge or publish the existence, contents, purport, effect or meaning of any communication (distress communications excluded), except to the person for whom the communication is intended, or to another employee of the railroad whose duties may require knowledge of the communication. The above applies either to communications received direct or to any that may be intercepted.

**404.** Before transmitting, any employee operating a radio transmitting set shall listen a sufficient interval to be sure that the circuit is not already in use, particularly for distress traffic.

**405.** A distress call will be preceded by the word "Emergency" repeated three times. Such calls shall be used only to cover initial reports of derailments, storms, washouts, fires, obstructions to tracks, or other matters which would cause serious delay to traffic, damage to property, injury to employees or the traveling public, and shall contain as complete information thereon as possible. All employees shall give absolute priority to communications from another station in distress, and except in answering or aiding a station in distress, shall refrain from sending any communications until there is assurance that no interference will result to the station in distress.

**406.** The railroad company is required to answer an official notice of violation of

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the terms of the Communications Act of 1934, as amended, within three days from receipt of notice, and any employee receiving inquiry concerning any violation shall answer such inquiry within 24 hours after receipt of notice.

**407.** Any employee shall permit inspection of the radio equipment in his charge and all FCC documents pertaining thereto, by a duly accredited representative of the Federal Communications Commission at any reasonable time.

**408.** Employees, except in yard operation, shall identify the radio station from which they are calling by prefacing their call with the railroad name, for example:

"ABC (Railroad) caboose train 92 calling engine";

"XYZ (Railroad) caboose train 92 calling engine train 89";

"Main (Railroad) engine 547 calling caboose 1402."

**408 (A).** Employees in yard operation shall identify the radio station from which they are calling by prefacing their call with the railroad name, for example:

"ABC (Railroad) yardmaster calling ABC (Railroad) engine 547";

"ABC (Railroad) engine 492 calling ABC (Railroad) yardmaster Dover (station)";

"ABC (Railroad) engine 492 calling ABC (Railroad) engine 547"; etc.

**409.** In certain cases at crossings, junctions, or paralleling tracks, some interference may develop with another railroad. In such cases, especial care in making identification shall be used, and the employees concerned shall cooperate in handling their business by alternating calls and being as brief as possible.

**410.** If any communication from a station other than another railroad radio station interferes with railroad radio service, the railroad employee shall endeavor to ascertain the identity of such station, and report the occurrence as soon as possible through authorized channels, to the superintendent, giving the exact time, nature of the communication and identity of the station, if possible.

Internationally, the word "MAYDAY" indicates a distress message, the word "PAN" an urgent message, and the word "SECURITY" a safety message. Railroad employees may hear such messages sent by aircraft, or, in coastal areas, by boats. Railroad employees hearing such messages must report them immediately through authorized channels to the superintendent, in addition to taking such appropriate action to relieve the distress as may be possible.

**411.** When hand signals cannot be given and radio is used in connection with switching movements, specific instructions as to movement must be given. For ex-

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ample: "Engine 547 back up 5 car lengths" rather than "Back up." In case of radio failure, or if radio contact is interrupted, movement must be stopped at once. Further movement must not be made until communication is made by words, or radio contact is restored.

**412.** Information that a train to be met or passed is in clear on siding must not be transmitted from head to rear end of train unless positive identification of the train to be met or passed has been made.

**413.** Train orders must not be transmitted by radio between head and rear end of train. **Note.**—Conversation between head and rear end of train relative to fulfillment of train orders in their possession is permitted.

**414.** Information must not be passed between head and rear end of train as to indication of train order signals. Employees on trains must not ask and employees at stations must not advise the indication of any train order signal or other fixed signal, nor the contents of any train orders affecting their train or any other train.

**415.** Except in emergency, or where specifically authorized, radio must not be used by the train dispatcher in the transmission of train orders. When so used, the rules covering train orders transmitted by telephone must be complied with.

**416.** Railroad radio must not be used for transmitting when located less than 250 ft from the scene of blasting operations, account of hazard of detonating dynamite charge where electric caps are used.

The train dispatcher will, upon advice from the foreman in charge, notify all trains operating in that territory the location of such blasting operations.

**417.** When using railroad radio there may be times when employees are not able to contact, or get response from another train or wayside station. If necessary to transmit important information, it should be transmitted regardless of whether or not an acknowledgment is received. When such information is transmitted, and no acknowledgment is received, necessary action must be taken based on the belief that the information was not received.

RAILWAY SIGNALING AND COMMUNICATIONS

# News Briefs

| TYPE OF SIGNAL PROTECTION | Jan. 1, 1959 | Jan. 1, 1958 |
|---|---|---|
| Block signal systems | 107,693.6 Rd mi | 109,894.8 Rd mi |
| | 136,982.3 Tk mi | 139,594.7 Tk mi |
| Train control, train stop and cab signals | 14,198.1 Rd mi | 14,227.9 Rd mi |
| | 25,285.0 Tk mi | 25,322.2 Rk mi |
| | 9,344 Locos | 9,770 Locos |
| Interlockings | 4,160 Plants | 4,184 Plants |

CORRECTION: These are the right figures for total signaling installed in the U. S. (Feb. issue p. 48)

SIX AMERICAN RAILWAY signal department men are now in England assisting the British Railways with the final stages of the electrification program currently under way in London-Midland area. Faced with a shortage of trained signal designers to complete the electrification of this 200-mile territory of two and four-track systems, the British Railways appealed for assistance. A letter was circulated by the Association of American Railroads to chief operating officers throughout the country asking for volunteers. The following responded: **A. P. Boettcher** and **D. E. Cahill,** assistant engineers, signal department, New York Central, respectively from the Eastern and Western districts; **Bernard A. Andrews,** assistant signal inspector, and **Richard R. McGuire,** signal designer, Nickel Plate Road; **Harold H. Gudenrath,** inspector, signal, electrical and communications department, Reading; and **Raymond C. Bailey,** chief draftsman, signal department, Richmond, Fredericksburg & Potomac. The engineers will be based in England for a minimum of 18 months, with options for additional time, if needed.

TERMINAL RAILROAD ASSOCIATION OF ST. LOUIS has scheduled for 1960 completion installation of automatic flashing light signals and short arm gates at eight grade crossings in St. Louis, Mo., at an estimated cost of $185,000. The work will be done by company forces.

ALTON & SOUTHERN will alter or relocate signaling and communications facilities and crossings, due to construc-

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