



BOOK OF RULES

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South Central Region



FOR THE GOVERNMENT OF EMPLOYEES ONLY



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PRR/RDG/WM South Central Region -- OPERATORS GUIDE

Introduction

The PRR/RDG/WM South Central Region represents the Pennsylvania Railroad (PRR), Reading Railroad (RDG), and Western Maryland Railway (WM) in South Central Pennsylvania and Maryland. The modeled portion is from Baltimore, MD, to the Harrisburg, PA, area (including the nearby Enola and Rutherford Yards). Staging extends this area southward to Washington, DC; westward to Cumberland, MD; and eastward to Reading, PA, and Columbia, PA. In addition, an interchange with the Norfolk and Western is modeled at Hagerstown, MD.

Within the South Central Region, the smaller WM and RDG Railroads have joined forces to compete directly with the giant PRR by means of an agreement formed in 1931 called the "Alphabet Route". The Alphabet Route was composed of (from west to east), the Nickel Plate (NKP), Wheeling and Lake Erie (W&LE), Pittsburgh and West Virginia (P&WV), Western Maryland (WM), Reading, Central of New Jersey (CNJ), Lehigh and Hudson River (L&HR), and New Haven (formally known as the New York, New Haven, and Hartford or NYNH&H) railroads. As most of these railroads were known by their initials, the name "Alphabet Route" was used for the combined route. The Alphabet Route provided a direct route from Chicago to the eastern ports of Baltimore, Philadelphia, New York, and Boston.

Therefore, on the South Central Region, unless specifically directed otherwise, the yardmaster would NOT send cars in the Baltimore WM Yard routed north Via Enola to the Baltimore PRR Yard. Rather, he would send them north on WM and RDG trackage to the Reading Rutherford Yard, and from there the Rutherford Yardmaster would transfer them to Enola. In like manner, the Baltimore PRR Yardmaster would NOT send cars routed Via Rutherford to the Baltimore WM Yard, but he would send them north on a PRR train to Enola Yard for transfer from there to the RDG in Rutherford. Of course, the same routing choices apply for cars heading south.

The way the car cards and waybills govern the routing of cars on the three railroads reflects this competition. As you run your trains, notice how the car movements follow these competitive constraints.

Modeling Concepts

The concept of "operations" modeled for the South Central Region consists of splitting one full model day into three smaller periods covering different times of the modeled day. These smaller periods, called "Tricks", represent about one third of a day on the railroad. Over a period of three operating sessions, each of about 4 hours duration and covering one trick, a complete railroad day elapses. Some trains scheduled to run daily on the prototype still run daily in this modeling concept. However, by breaking the modeled "day" into tricks, these daily trains do not necessarily run during every operating session. Rather, they run only during those sessions that represent a specific trick.

The first trick covers the period from 4:00 AM until 12:00 NOON. It represents the "morning" or daytime trick. This trick features morning rush hour passenger trains and several local freights.

The second trick covers the period from 12:00 NOON until 8:00 PM. It represents the "afternoon" or evening trick. This trick features evening rush hour passenger trains and more local freights.

The third trick covers the period from 8:00 PM until 4:00 AM. It represents the "night" or "graveyard" trick. This trick features only a few "overnight" passenger trains and includes the daily "Per Diem" transfers.

NOTE: "Per Diem" refers to the daily fees charged by a freight car's home railroad to the railroad in possession of the car. Railroads minimize these fees by returning cars before midnight.

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Section 1 -- General Operations

1.0 Overview

This guide covers all rules necessary for engineers to operate on the railroad.

Appendix A on page 12 contains a list of common definitions.

Appendix B on page 13 explains how to use Digitrax throttles.

Appendix C on page 14 contains an explanation of train identification symbols.

Appendix D on page 16 shows track diagrams and interlockings names.

1.1 Control of track

The yardmaster controls all track within the yard limits, as designated by trackside white, V-shaped signs. The dispatcher controls main, staging, siding and running tracks located outside of yard limits. Neither the dispatchers nor any yardmasters directly control industrial tracks.

1.2 Permission to Move

All trains must have permission before moving on all controlled trackage. Dispatcher permission is required on staging, running, siding and mainline trackage. Yardmaster permission is required on yard trackage. On signaled track, the proper signal gives permission to enter that track. Headroom or tailroom moves require separate permission.

1.3 Headlight

The lead locomotive of all trains and all light locomotives shall display a headlight in the direction of travel while moving.

1.4 Staging

The dispatcher controls all staging tracks. Before aligning switches for departure or entrance, moving a train from a departure track or entering any track in a staging area, obtain permission from the dispatcher. Card boxes at the staging areas contain locomotive cards and car cards for each train. There are 2 side by side boxes for each track at Columbia, 2 stacked boxes for each track at Cumberland, and 1 box for each track at Harrisburg; Washington DC; and Reading.

1.4.1 Departing

Pick up the locomotive and car cards for your train (from BOTH boxes if there are 2). Select the locomotive on your throttle. **After obtaining dispatcher** permission to depart, align all switches for your track. When the switches are properly aligned, the **GREEN** LED indicator for your track will turn on. Then turn on staging area track power for your track by inserting a plug in the proper receptacle on the control panel. When your locomotives depart the staging track, remove the power plug and return it to the top "OFF" receptacle. Do NOT realign switches.

1.4.2 Entering

After obtaining identification of your staging track number and dispatcher permission to enter the staging area, align all switches for your track. When the switches are properly aligned, the **GREEN** LED indicator for your track will turn on. Then turn on staging area track power for your track by inserting a plug in the proper receptacle on the control panel. When the train is fully stopped on the staging track, set the power to 0 (zero) and dispatch the train from the throttle. Leave the headlights ON. Do NOT mute the sound. Do NOT realign switches. Place the track power plug in the top "OFF" receptacle when you no longer need power on the staging track (this will turn off headlights and sound). Place your car cards in the correct boxes for the track your train is now on. If there are 2 boxes, split the card packets between boxes. Face cards for terminating trains away from the aisle.

NOTE: Crews of trains about to enter Reading, Harrisburg and Washington DC staging must **STOP** their train as the locomotive is passing the display cases behind the Baltimore WM Yard. Then go into the other room to align switches and set up power for the track authorized by the dispatcher. You may then watch your train on the monitor above Enola as your train enters the staging track ladder.

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1.5 Leaving cars on track

Obtain permission from the dispatcher or a yardmaster before leaving any cars (including caboose/cabin) on dispatcher or yardmaster-controlled track.

1.6 Cabin/Caboose Usage

In this paragraph, use of the term caboose means cabin or caboose. A caboose is required for all freight trains operating on the mainline. Except for local trains, the caboose shall be at the end of the train. A local train operating within one signaled interlocking of its destination may position the caboose either next to the locomotive OR at the end of the train. It is not necessary to keep the caboose with the local train while drilling industries. Light engine moves do not require a caboose.

1.7 Helper Operation

Road crews are responsible for helpers attached to road trains. Road crews are therefore responsible for obtaining all clearances and following all instructions. All trains with helpers shall operate at no more than medium speed.

1.8 Crew Assignments

A hook, mounted on the fascia below the Enola Yard and behind the Reading/Western Maryland Dispatcher, holds rectangular Crew Assignment tokens. The tokens are RED (for Reading and Western Maryland trains) and Dark Green (for Pennsylvania Railroad trains). When you are ready to run a train, take the next token from the hook and place in the red or green token box next to the hook. You may NOT skip a token to take the next one down. You may NOT wait for a different color token.

If you drew a Red token, turn to the Reading/Western Maryland Dispatcher and tell him that you are the crew for his next train. If you drew a Dark Green token, go to the other side of the Enola Yard and tell the Pennsylvania Railroad Dispatcher that you are the crew for his next train. The Dispatcher you talk to will give you an assignment sheet that identifies your train and its starting location.

The Assignment sheet will show you your train ID, and train origin. For trains starting in staging, it will also include the locomotive DCC number. You may select the DCC number on your throttle, but, per section 1.3.1, do not plug in the staging track power plug until you obtain dispatcher permission. If not preassigned, the yardmaster at the yard where your train originates will assign the locomotive.

1.9 Maximum Speeds

Normal Speed passenger 45 MPH, freight 40 MPH. [Indicated by a clear signal]

Medium Speed 25 MPH. [Indicated by an approach signal]
Movement of any train with helpers attached shall not exceed Medium Speed regardless of signal indication.

Restricted Speed 15 MPH (includes all movements within yard limits, on industrial tracks, on running tracks and by dark signals). [Indicated by a restricted signal]
Movement on any track by High and Wide cars shall not exceed Restricted Speed regardless of signal indication.

1.10 Bad Orders

Bad orders are specialized waybills that you may insert into a car card in front of the normal waybill. A supply of blank bad order inserts can be found in the box next to the Crew Assignment tokens. Fill out the insert stating what is wrong with the equipment. If the car can be moved in a train, the bad order will supersede routing on the waybill. If you can no longer move the equipment in a train, then manually place that car or locomotive on a track in the Baltimore WM Aux Yard adjacent to the Baltimore WM Yard. Place the car card or locomotive card with the bad order inserted into the Baltimore WM Aux Yard car card box located on the fascia near the end of the yard.

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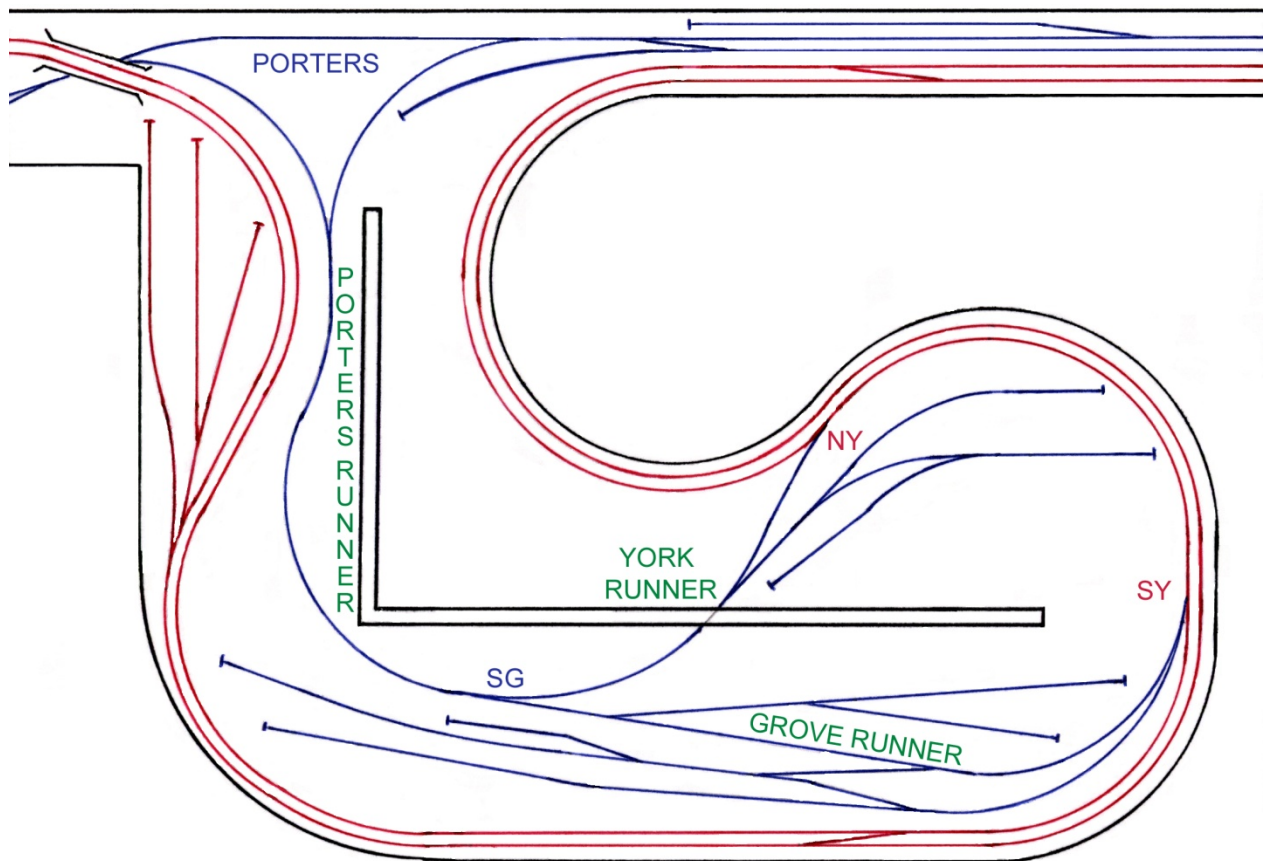
1.11 Running Tracks (Runners)

All running tracks are dispatcher controlled but non-signaled. Movement of ANY train or equipment on any running track shall not exceed Restricted Speed. Notify the controlling dispatcher when you have cleared a running track.

The following diagram shows the three running tracks that the Reading/Western Maryland Dispatcher controls. Track shown in Red in the diagram is PRR track. Track shown in Blue is Western Maryland track and includes the three running tracks.

- The Porters Running Track extends from the Western Maryland signal at Porters Interlocking to the switch at SG.
- The Grove Running Track extends from the switch at SG to the PRR switch on the PRR mainline track at SY. (The P H Glatfelter industrial switch just south of PRR switch SY is part of this Runner.)
- The York Running Track extends from the switch at SG to the PRR switch on the PRR mainline track at NY.

Permission to occupy a the running track does NOT include permission to use a switch at the end of that running track unless the dispatcher gives you permission to occupy two adjacent controlled tracks that share that switch.



1.12 Authority to Move Trains

1.12.1 Rule 251

On PRR track between BP and MW interlockings, trains are governed by block signals whose indications control authority of trains ONLY for following movements on the same track.

1.12.1.1 Block Status

On PRR track between BP and MW interlockings, if the dispatcher authorizes you to run on Rule 251 track on the opposing main, he will also issue a block status of "Clear Block" or "Permissive Block". The entry signal onto that opposing trackage, if not at Stop, will display

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only a Restricting aspect regardless of block status. The signal itself does NOT grant you permission onto that trackage. You must also have the block status from the dispatcher before accepting the signal to enter Rule 251 trackage running against the signaled direction. The restricting signal means that you must run your train at Restricted Speed until your ENTIRE TRAIN clears the interlocking. After crossing the interlocking at Restricted Speed, if the status is "Clear Block", you may then run at Normal Speed, but if the status is "Permissive Block", you must continue to run at Restricted Speed.

The signal DOES grant permission onto the trackage if running WITH the signaled direction.

1.12.2 Rule 261

On all signaled portions of the railroad except on PRR track between BP and MW interlockings, trains are governed by block signals whose indications control authority of trains for both opposing and following movements on the same track.

1.12.3 Verbal Dispatcher Clearance

The dispatcher may issue verbal clearance orders. When he does so, those orders supersede signal authority to the station specified in the orders, or if none specified, to the next signal.

Section 2 -- Communications

2.0 Overview

The following rules govern all communications on the railroad.

2.1 Dispatchers

2.1.1 Radio

Normally, contact a dispatcher using two-way radio. When working with the Reading/Western Maryland Dispatcher, use channel 5. When working with the Pennsylvania Railroad Dispatcher, use channel 8. (Do NOT use side channels or security codes. If your radio allows setting of side channels or security codes, use only channels 5.0 and 8.0.)

Before attempting to contact a dispatcher, make sure that the dispatcher is NOT currently talking to another train crew. Do NOT interrupt another conversation. Let the prior crew finish before you try to initiate contact.

When initiating contact with the dispatcher, use your railroad and train symbol ("PRR train B-93 to Dispatcher"). You MUST include the Railroad identification on the first contact of each conversation. Do NOT relay any other message (such as requests, reports or questions) until the dispatcher confirms the contact.

State your message in a concise manner. The dispatcher does not want long-winded explanations of why. Usually all the dispatcher needs to know is where you are and where you need to go. If he wants more, he will ask.

2.1.2 Phone

Contact the dispatcher by phone when you are working locally in the York or Spring Grove areas. Use the phone mounted on the fascia between NY and SY. Turn the rotary knob to select the correct dispatcher (See Paragraph 1.11 to help you determine which dispatcher controls the track you need to use.) Push the call button the number of times indicated on the button label and wait for an answer.

2.2 Yardmasters

Contact yardmasters directly without using the radio (yardmasters do not use radios). Always talk to a yardmaster before entering yard limits.

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Section 3 – Passenger Operations

3.0 Overview

Passenger trains run on a Public Timetable. The same rules that govern freight train movement also govern ALL passenger train movement. Unlike an Employee Timetable, this Public Timetable does NOT give the train permission to occupy a track at a given time or to pass a stopped signal. Rather, it states the EARLIEST time a train may leave the station to ensure that all passengers have boarded.

3.1 Public Timetables

Each of the three railroads has a separate Public Timetable.

3.1.1 Fast Clock

There are four fast clocks on the layout, two analog and two digital. You can see one of the two analog clocks from either room where they are mounted on each side of the stairwell. One digital clock is located on each dispatcher's desk. The Public Timetables are based on a 1 to 1 fast clock. That is, 1 minute of railroad time equals 1 minute of real time. However, the fast clock for each of the three tricks always starts over at 10:00 AM fast clock time.

3.1.2 Interpreting Public Timetables

One column of a Public Timetable represents one individual train. For Southward trains, read down the left side of the Public Timetable. For Northward trains, read up the right side of the Public Timetable. The rows represent the stations found along the route. When the train column at a station contains a time, the train will stop at that station.

NOTE: A staging location is listed on a Public Timetable as a station.

3.1.3 Public Timetable Symbols

- Shaded rows on the Public Timetable indicate those Stations along branches.
- Omission of a time in the train column at any given station means that the train does NOT stop at that station, but proceeds directly to the next listed station that does show a time in that train's column.
- A time preceded by the letter "A" indicated an expected arrival time. This symbol is used at the last station stop where the train terminates, or at a station where there is a scheduled hold over for longer than a few minutes before the train will leave.
- Connections are marked on the Public Timetables with a blue "C" symbol. The connecting trains are identified by remarks and by showing their train symbols above the time.
- A time preceded by the letter "L" indicates when the train will leave the station. This symbol is used at the station where the train originates, and when there is a scheduled hold over longer than a few minutes beyond the arrival time.
- Meets are marked on the Public Timetables with a red "M" symbol. The trains to be met are identified by remarks and by showing their train symbols above the time. Unless otherwise instructed by the dispatcher, a passenger train MUST remain at such stations until the train that they are to meet arrives and passengers have a chance to move between the trains.
- Times that are underlined have a Meet or Connection, with the counterpart train symbol shown above the time.
- Times listed in normal font are before noon.
- Times listed in **bold font** are after noon.

3.1.4 Station Platforms

All stations have platforms on all tracks. Passenger trains may stop at any platform. For passenger trains longer than the station platform length, the train should move forward and make as many secondary stops as needed to allow all passengers to depart all cars. The departure time stated on the Public Timetable indicates the EARLIEST time a train may depart from the station after all secondary stops are completed.

NOTE: Some sleeping cars may not have passengers for a given station and therefore do not have to stop at a platform. The conductor may ask passengers to walk a reasonable distance through other cars in order to depart the train.

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Section 4 -- Local Operations

4.0 Overview

Local operations are the drilling of industries. Drilling involves pickup of cars already spotted at industries and setout of cars in your train at the industries. Do NOT flip any waybills.

4.1 Permission

4.1.1 Industrial Track

You do not need dispatcher or yardmaster permission while drilling on industrial track. Obtain permission only before re-entering controlled trackage. Return the switch at the point between industrial and controlled track toward controlled track unless otherwise instructed.

4.1.2 Running Track

Obtain permission from the controlling dispatcher to use running tracks. Return the switch at the point between running track and signaled track toward signaled track before reporting clear.

NOTE: Crews working in the York and Spring Grove area: See Paragraph 1.11 to help you determine which dispatcher controls the mainline tracks and running tracks you need to use.

4.2 Car Cards and Waybills

The "TO" line of the waybill will show the proper industrial area for the car. The "RECEIVER" line of the waybill will show the proper industry for the car. The principle of industrial drilling is: do pickups first so that there will be room to do setouts. Add to the train from the industrial spots all cars identified on car cards in the PICKUP side of the box. Check these cars for possible setout at other industries in the same industrial area. Set out cars from the train at the proper industry and place their car cards in the SETOUT side of the box. The order of car cards in the PICKUP and SETOUT boxes does NOT matter.

4.3 SETOUT Precedence

When there is not enough space to set out all cars, determine which cars to set out by their precedence. The levels of precedence, from highest to lowest are:

- "Overdue Shipment"
- "LCL - EXPEDITE"
- Other cars with loads
- Other cars that are empty (MTY)

It does not matter which cars with the same level of precedence get set out if not all will fit. Do NOT remove the "LCL" or "Overdue Shipment" inserts.

4.4 Maximum Number of Cars

The SETOUT side of the car card box for each industry group contains an orange reference card listing the maximum number of cars for each industry in the area. If the number of cars in the train for any industry exceeds that industry's maximum, take those additional cars with the train when it leaves after inserting an "Overdue Shipment" insert behind the waybill. You can find "Overdue Shipment" inserts in the box next to the Crew Assignment tokens.

4.5 Blocking Cars

It is NOT necessary for local crews to block pickups by destination.

4.6 Car Card Sequence

When leaving the industrial area, make sure that the car cards are in the same sequence in the stack as the cars are on the train (locomotive, first car, second car ... last car, caboose/cabin).

4.7 Maximum Local Train Length

There is no maximum car limit on local trains (do ALL pickups en route). The maximum train lengths shown on locomotive cards are to provide you with guidance for when you need to call for helpers if going uphill. The last Yardmaster to work your train will adjust the length (it may be necessary to set out cars even if they are for the correct destination) if your destination is staging.

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4.8 Hazardous cars

Their car cards specifically identify hazardous cars. There are two types of hazardous cars:

- Cars containing shiftable loads not constrained by bulkheads
- Cars containing dangerous cargo or the residue of dangerous cargo

Place at least one idler car between any hazardous car and the locomotive or cabin/caboose for crew protection. Use any other non-hazardous car in the train as an idler. For short local trains that do not have enough cars to provide protection, use any available extra empty car as the idler.

4.9 High and Wide cars

Blue car cards identify cars used for moving High and Wide loads. Do not pick up a High and Wide car unless you are operating a train whose work description includes specific instructions to move High and Wide cars. When moving High and Wide loads, ALWAYS place an idler car, usually an empty flat car, at each end of the High and Wide car. If more than one High and Wide car is in the same train, one idler car between the two loads can serve as both the trailing idler for one load and the leading idler for the next load. After setting out High and Wide cars at an industry, return idler cars to your destination yard.

4.10 Hand Brakes

Hand brakes are installed at all mainline locations where you must leave a train on a grade while drilling industries. These hand brake locations are indicated in the scenery by the (seemingly random) positioning of some wooden ties that just happen to form a "V" pointing to the brake mechanism. Use the hand brakes by following these steps in this order:

- A. Stop the train with the axle of a car that will remain on the train over the brake.
- B. Set the brake ON (raise the brake using the labeled control).
- C. Cut off the power and any cars needed for the local work.
- D. Complete the local work.
- E. Reconnect the power and detached cars to the train.
- F. Release the brake (lower the brake using the labeled control).

Section 5 -- Interlocking Rules

5.0 Overview

The following rules govern operations within interlockings.

5.1 Permission

Do not move a train into interlocking limits without a proper signal indication or verbal permission of the dispatcher.

5.2 Reverse Movements

Do not make reverse movements within interlockings until after you obtain the dispatcher's authorization. Before you make multiple reverse movements obtain specific permission from the dispatcher to make multiple moves.

5.3 Holding interlocking limits

Do not hold an interlocking (including stops during drill moves) until after you obtain the dispatcher's authorization to hold the interlocking.

5.4 Stopped Signals

When the dispatcher authorizes a train to pass a stopped signal, operate that train at restricted speed.

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Section 6 – Audible Warning Signal Rules

6.0 Overview

The following rules govern operation of the whistle, horn and bell on locomotives.

6.1 Whistle / horn

Horns are on diesel locomotives. Whistles are on steam locomotives. The warning sounds, consisting of groupings of specific sequences of long and short blasts are identical for all locomotives.

6.1.1

Sound 1 long blast **—**

- When stopped, apply brakes.

6.1.2

Sound 2 long blasts, 1 short blast, 1 long blast **— — O —**

- Approaching a road crossing
- Approaching locations where maintenance personnel are working
- Approaching and passing standing trains

NOTE: At a road crossing, hold the last long blast until the locomotive is on the crossing.

6.1.3

Sound 1 long blast, 1 short blast **— O**

- Approaching passenger stations

6.1.4

Sound 2 short blasts **O O**

- When standing, warning that train will start to move in a forward direction
- Acknowledgement of hand signal from a train crew or other employee

6.1.5

Sound 3 short blasts **O O O**

- When standing, warning that train will start to move in a reverse direction

6.2 Bell

Sound

- When passing over bridges and in tunnels
- When approaching and passing over road crossings
- When passing standing trains or cars on adjacent tracks
- While passing maintenance personnel




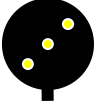








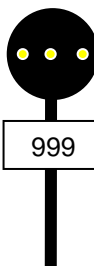

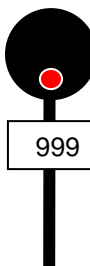
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Section 7 -- Signal Rules

7.0 Overview

Signals are located either overhead and slightly to the right of the track or on a stand to the right of the track. A proper signal gives permission for the train to pass that signal.

7.1 Signal Aspects

NAME	INDICATION	PRR	ASPECT WM	RDG
stop	Stop.			
approach	Proceed prepared to stop at the next signal. Trains exceeding medium speed must begin to reduce to medium speed as soon as the engine passes the approach.			
clear	Proceed not exceeding normal speed.			
restricted	Proceed at restricted speed.			
Stop and proceed	Stop, then proceed at restricted speed.			

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7.2 Dummy Masts

To verify which position on a signal bridge controls your track, count the tracks, starting from the right, until you reach the track you currently occupy. The controlling signal is the one in the position with the same count, starting from the right. If any track going under the signal bridge is not controlled by a signal on that bridge, then instead of a signal, a dummy mast will occupy that position. The dummy mast displays a **blue** reflective plate instead of a signal head.

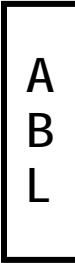

7.3 Dark Signals

The dispatcher shall grant verbal permission before you may pass any dark (non-lighted) signal. Make all movement past dark signals at restricted speed. Report unlit signals to the maintenance supervisor (superintendent).

Lights on Block Limit signs are present to enhance visibility only and if not lit are not considered to be dark.

7.4 Signs

Supplementing the primary signals, auxiliary signs provide constraints to permissions.

NAME	INDICATION	COMMENTS	ASPECT
Approach Block Limit	Proceed prepared to stop at the block limit. Unless already granted dispatcher permission to proceed beyond the block limit, trains exceeding medium speed must begin to reduce to medium speed as soon as the engine passes the ABL sign.	The sign may be on either side of the track. If it is between two tracks, then it applies to the track it is positioned closest to.	
Block Limit	Unless already granted dispatcher permission to proceed beyond the block limit, all trains shall stop.	The sign may be on either side of the track. The station name is on the sign. Both the yellow light and the red light are always on. The red light is centered. The yellow light may be on either side. The sign applies to the track on the side of the yellow light.	

7.5 Reverse Movements

The dispatcher shall authorize all reverse movements between interlockings.

7.6 Hand Switches

Clearance onto a dispatcher-controlled signaled or running track includes permission to operate all hand switches on that track. Before operating a manually controlled crossover, you need permission onto BOTH tracks. Unless instructed otherwise, return ALL hand switches on controlled track to normal position after you clear them and notify the controlling dispatcher after you have done so.

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Appendix A -- Definitions

TERM	DEFINITION
Block	A section of track between interlockings where movements are authorized by signal indication or the dispatcher's verbal permission
Cabin	PRR name for a caboose
Car Card	A 2 x 3.5" card that contains identifying information for a car (or block of cars).
Car Card Packet	A group of car cards (one for each car or block of cars in the train). Car cards in the packet MUST be kept in the same order as the cars in the train
Clear (Report Clear)	The ENTIRE train has passed the specified location
Consist Card	An insert to a locomotive card indicating that the locomotive is electronically connected to another locomotive as part of a Multiple Unit (MU), that may be separated for independent use of the locomotives as needed by the crew.
Crew Info Card	A card inserted into the pocket of the lead locomotive card on a car card packet that contains all pertinent information about a train
Double	To couple cars on one track to cars on another track
Drilling	To switch cars (in yards or at industries)
Dummy Mast	A mast displaying a blue reflective plate instead of a signal head, and used as a placeholder for a position on a signal bridge marking a track that is not signaled from that bridge.
Foul	Obstruct
Hand Switch	A switch not under dispatcher control. Operated by toggle on a local control panel.
Headroom	A length of track into which a train may move beyond its current position in a forward direction, then reverse on any track
High and Wide	A load, on a freight car, that extends beyond the normal safety height and width clearance limits, hangs over the sides of the car, or extends beyond the end of the car's floor or bulkheads. A car carrying such a load. A train moving a car carrying such a load.
Home Signal	A (dispatcher) controlled signal of an interlocking
Idler Car	A car placed at each end of a loaded High and Wide car to provide a safety space into which overhanging or shifting loads can project without damaging other equipment.
Industrial Track	A track that serves industries
Interlocking	An interconnection of signals and switches whose movements must succeed each other in a predetermined sequence to assure that signals cannot be displayed simultaneously on conflicting tracks and that switch appliances cannot be moved under a train.
Interlocking Limits	Tracks between opposing home signals of an interlocking
LCL Card	An insert into a car card indicating that the card has a "less than car load" shipment (section 2.3)
Light engine	A locomotive or set of locomotives without any cars, with or without an attached caboose/cabin.
Locomotive Card	A 2 x 3.5" card that contains identifying information for a locomotive, including a DCC address
Main Track	A track on which train movements are authorized by signal indication or verbal permission of the dispatcher
Medium Speed	Approximately 1/2 maximum authorized speed (section 1.8)
Normal Speed	Maximum authorized speed (section 1.8)
Overdue Shipment Card	An insert into a car card indicating that the card has a priority shipment (section 2.3 and 2.4)
Pick Up	Add one or more cars to a train
Restricted Speed	Be prepared to stop before any/all track obstructions (including other trains, cars, improperly aligned switches, etc.) before the next signal (section 1.8)
Running Track or Runner	A non-signaled track controlled by the Dispatcher. Move on running track at restricted speed.
Service Card	An insert into a steam locomotive card indicating that the locomotive will need serviced soon
Set Out	Drop one or more cars from a train
Siding Track	A track adjacent to the main track, controlled identically to a main track
Signal Aspect	Appearance of a signal (what it looks like) that conveys the indication
Signal Indication	Required action (what it means you should do) conveyed by a signal aspect
Staging Area	A yard that simulates a non-modeled location where trains originate and terminate
Tail Room	A length of track into which a train may move beyond its current position in a reverse direction, then forward on any track
Train Symbol	Identity (name) of a train. Located on the train sheet
Waybill	A color-coded paper, inserted into a car card, that shows the car destination and contents
Yard Limits	Boundary of yard territory. Designated by white, V-shaped "Yard Limit" signs

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Appendix B -- Digitrax Throttles

There are three main DT Series throttle types being used (DT100R, DT300R, DT400R). There is also one UT Series throttle (UT4R). The Digitrax UT4R throttle has only one knob and controls one train. All Digitrax DT series throttles are capable of being used right or left handed and therefore can control 2 trains at once. Unless you have consisted locomotives on your train, select only one locomotive at a time. Turning the knob on either the right or left side makes that side active and all future commands will be for that side. Do NOT put sideways pressure on the knobs, especially when using DT100R throttles. They have plastic shafts and you will strip them. Digitrax recommends a two handed approach -- but one handed is OK if you are careful not to put too much pressure on the knobs. All throttle types vary slightly in use, so the details are explained separately below.

DT400R

Selecting a locomotive	Plug throttle into loconet jack. Press <LOCO> button. Type in address of locomotive on button pad. Press <ENTER> button.
Dispatching a locomotive	Plug throttle into loconet jack. Press <LOCO> button. Press <DISP> button.
Controlling functions	Press number on button pad corresponding to desired function.
Reversing direction	Either push throttle knob twice OR press <<->> button on correct side of throttle.
Controlling speed	Adjust with knob.
Consisting locomotives	Plug throttle into loconet jack. Select TOP locomotive on right side. Select BOTTOM locomotive on left side. Make sure locomotives move in the same direction on the track. Press <MU> button. Press <+> button.
De-consisting locomotives	Plug throttle into loconet jack. Select TOP locomotive on right side. Select BOTTOM locomotive on left side. Press <MU> button. Press <-> (minus) button.

UT4R

Selecting a locomotive	Plug UT4R into loconet jack. Use dials to select locomotive address. Press the <SEL> button. ----- OR ----- UNPLUG UT4R from the loconet. Use dials to select locomotive address. PLUG UT4R back into the loconet. In either case, you will get a green LED to show that you have successfully selected the locomotive. NOT getting the green LED is an indication that the locomotive is selected on another throttle.
Dispatching a locomotive	Preferred method: Turn any one of the four rotary digit dials to a different number. You will get a bright red LED to show you have successfully dispatched the locomotive. or Alternate method: UNPLUG UT4R from the loconet. Press the F4 button, then release it. Press and HOLD the <DISP> button (same button as the F4). Plug UT4R back into the loconet while still holding the <DISP> button. You will get a dim red LED. RELEASE the <DISP> button. You will get a bright red LED to show you have successfully dispatched the locomotive.
Controlling functions	Press an <F0> through <F6> button for functions 0 through 6. Press and HOLD the <SHIFT> button while pressing an <F7> through <F12> button for functions 7 through 12.
Reversing direction	Use the three position toggle switch to control direction by moving the switch to the opposite end position. NOTE: The center switch position is " braking mode " that will stop the locomotive. When the switch is in the center position, the power knob is inactive.
Controlling speed	With the reversing toggle switch in either end position, use the large power knob.
Consisting locomotives	Not supported by this throttle.
De-consisting locomotives	Not supported by this throttle.

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Appendix C -- Train Symbols

General

An odd ID number indicates a northbound train.
An even ID number indicates a southbound train.

Exceptions to this scheme include some locals (such as "BALT") that do not contain an ID number; and the Reading to Enola Transfer that runs both directions as "HT-1" (Harrisburg Transfer 1). "Harrisburg" is the Reading's name for Rutherford.

Any train listed as "XXX/YYYY" means it first runs as "XXX", then turns and becomes "YYY" at a location given on the bottom of the Crew Info card, for example, "WM WM-2/WM-1".

Non-standard symbols may be used for special circumstances.

Common Abbreviations

The PRR uses two different sets of abbreviations, one set for unit trains and a different set for road trains.

For PRR road trains, a single "P" used before the ID number indicates a "Philadelphia Division" train. A single "B" used before the ID number indicates a "Baltimore Division" train. The exact destination for the train CANNOT be determined from these abbreviations – just the division.

For PRR unit trains, the following table shows the letters and their meanings.

Letter	PRR Meaning
"B"	Baltimore
"D"	Washington DC
"H"	Harrisburg
"L"	Lancaster (Columbia staging)
"P"	Philadelphia (Columbia Staging)

For Reading trains, the following table shows the letters and their meanings.

Letter	Reading Meaning
"H"	Rutherford (Harrisburg)
"L"	Lurgan (and points beyond on the Western Maryland)
"R"	Reading

For Western Maryland trains, the following table shows the letters and their meanings.

Letter	WM Meaning
"B"	Baltimore
"C"	Cumberland
"H"	Hagerstown
"T"	Thomas, WV (Cumberland Staging)
"Y"	York

The Norfolk & Western uses "S" or "NW" to represent Shomo Yard in Hagerstown.

Multiple Sections

Multiple sections can run as either an Advanced or Second section. The PRR uses an "A" prefix before a train name to indicate an advanced section (such as "PRR AP-9"). The Reading and Western Maryland use an "ADV" prefix before a train name to indicate an advanced section (such as "WM ADV AJ-1"). The Reading and Western Maryland use a "2/" prefix to indicate a second section (such as "RDG 2/CSD-94"). All multiple sections must have the same origin and destination as their main section.

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Road Trains

Road trains have a 1 to 3 position alphabetic designation, followed by a dash and a 1 or 2 digit numeric designation.

Pennsylvania Railroad road trains have a 1 to 3 position alphabetic designation, followed by the numeric designation. Examples are "P-29", "B-8", "LCL-5", and "PNE-2".

Reading Railroad road trains have 2 or 3 position alphabetic designations, followed by the numeric designation. "AJ" trains ("Alpha Jets") and "CSD" trains ("Central State Dispatch") run between Reading and Baltimore WM (all will be even numbered). Examples of other Reading trains are "RDG HL-2" and "RDG HR-1".

Western Maryland road trains have 2 or 3 position alphabetic designations, followed by the numeric designation. "AJ" and "WAJ" trains ("Alpha Jets") and "CSD" trains ("Central State Dispatch") run between Baltimore WM and Rutherford (all will be odd numbered). "WM" trains run between Hagerstown and Baltimore WM (both even and odd numbered). "BT" run between Baltimore WM and Cumberland (Thomas, WV) (all will be odd numbered). "TB" trains run between Cumberland and Baltimore WM (all will be even numbered). "HY" trains run between Hagerstown and York (all will be even numbered). "YH" trains run between York and Hagerstown (all will be odd numbered).

Passenger

All Passenger trains have a numeric designation. No routing information (beyond direction) can be obtained from this number. Examples would be "PRR 59" and "WM 6". For trains where a name (such as the "Liberty Limited") is included on the Crew Info card, use the numeric designation ("PRR 58" or "PRR 59") instead for all communications.

Locals

Some locals have alphabetic designations such as "BALT" or "HARRIS". Others have standard road train designations such as "PRR B-93".

Unit Trains

Only unit coal hopper trains and unit empty hopper trains are run. Sequence numbers for unit trains are reset every 24 hours.

Pennsylvania, Reading, and Norfolk & Western unit trains are designated by a "U" for loaded coal hoppers or an "X" for empty hoppers, followed by a one-position origin code, a one-position destination code, and a sequence number. Western Maryland unit trains that work en route are also designated this way. For example, the first southbound coal train from Reading to N&W's Shomo Yard is "RDG URS-2" (first even number). The second northbound empty hopper train from Washington, DC, to Harrisburg is "PRR XDH-3" (second odd number).

Western Maryland unit trains are designated by the letter "X" followed by the direction they travel, and a sequence number. For example, the first southbound coal train from Cumberland to Baltimore is "WM XS-2". The second northbound hopper train would be "WM XN-3".

Extras

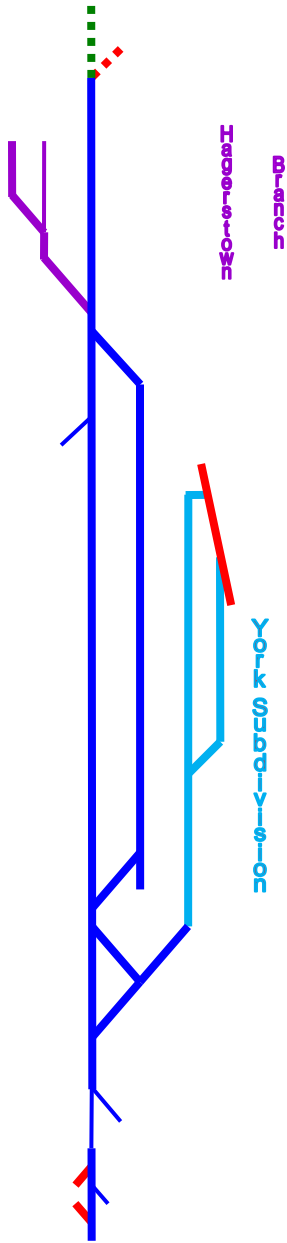
For special purpose trains, the type of train and the word "Extra" is used to designate the train. Examples are "Work Extra", "H&W Extra", and "Caboose Extra".

Reading and Western Maryland extras are named for the destination and the letter "X". Examples are "Cumberland X", "Reading X", and "Rutherford X".

PRR extras are named by adding the letter "X" to an existing train ID (as if it were a second section). Examples are "B-8X" and "P-13X". All PRR extras must have the same origin and destination as their main section.

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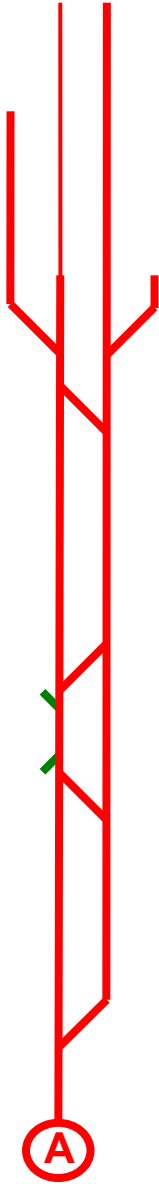
2 Western Maryland



Int.	Name	Location	Facility
X	Lurgan		Lurgan Roundhouse PRR Connection Reading Connection
X	Town	Hagerstown	Cumberland Staging Hagerstown Industrial/Station N&W (Shomo Yard)
X	Edge	Edgemont	Hagerstown Branch Connection
	Hanover		Hanover Industrial
	NY	North York	York Running Track PRR Connection
	SY	South York	Grove Running Track PRR Connection
	SG	Spring Grove	York Running Track York Station Grove Running Track Spring Grove Station Porters Running Track
X	Porters	Porters Sideling	Helper pocket Porters Running Track York Subdivision Connection
	EG	Emory Grove	Baltimore WM Yard
X	NB	North Baltimore	Baltimore WM Yard/Aux Yard PRR Connection Baltimore WM Station Hillen Station

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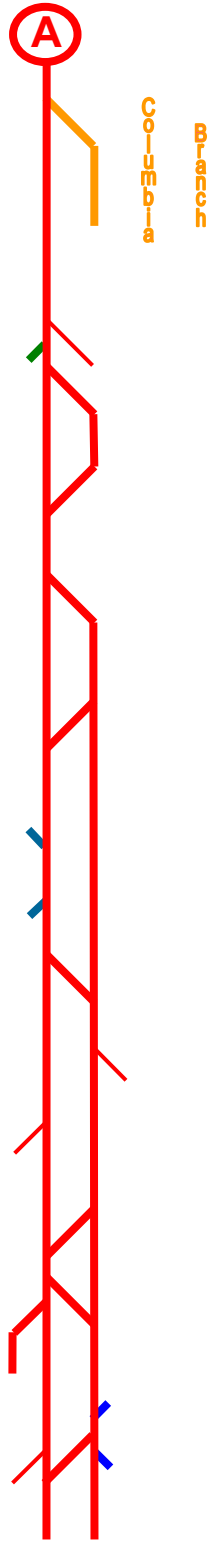
3 Pennsylvania



<u>Int.</u>	<u>Name</u>	<u>Location</u>	<u>Facility</u>
X	Day	Enola	Enola Yard
X	State	Harrisburg	Harrisburg
X	Stell	Wormleysburg	Helper Pocket
X	Lemo	Lemoyne	RDG Connection
X	NC	New Cumberland	

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3 Pennsylvania (continued)



<u>Int.</u>	<u>Name</u>	<u>Location</u>	<u>Facility</u>
X	Wago	Wago Junction	Columbia Branch Connection
X	Cola	Columbia	Columbia Branch
X	Lurgan		Lurgan Roundhouse WM / RDG Connection
X	Man	Manchester	
X	MW	Mount Wolf	
	Emig	Emigsville	Emig Block Limit
	NY	North York	York Running Track
	SY	South York	Grove Running Track
	GR	Glen Rock	GR Block Limit
	NF	New Freedom	New Freedom Industrial
	Park	Parkton	Parkton Industrial
X	BP	B&P Junction	Washington, DC Connection
X	NB	North Baltimore	NB Industrial WM Connection Baltimore PRR Yard Hillen Station

<http://pamodelrailroads.com/jwarner>

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