Station Operator Handbook

Guide For BC&SJ Operators

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V1.0

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Operator duties

Operators perform the following functions:

- Copy train orders from the dispatcher
- Write clearances for trains when requested by the dispatcher
- Makes OS reports so the dispatcher will know train locations
- When there are two operators, the second operator will run the interlocking at Toh Junction (top of helix) in addition to performing the South Jackson and Browning operator duties

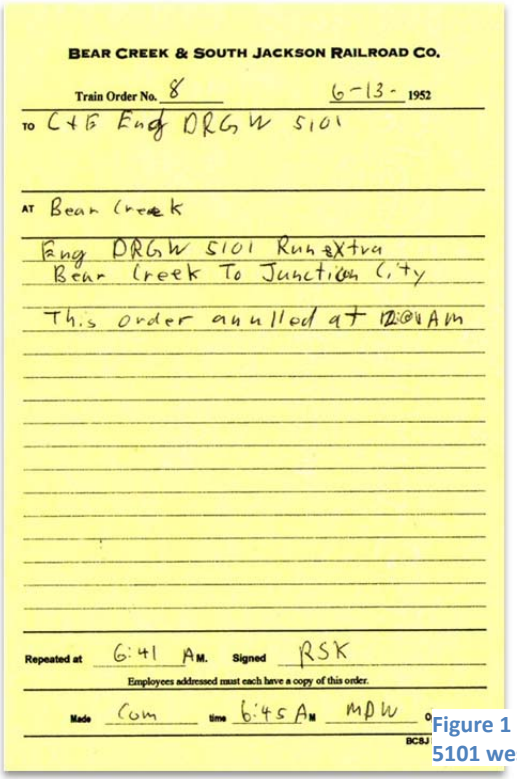
Where and how many operators?

The BC&SJ lacks space for every station to have its own operator. Depending on the crew size available either one or two operators act as:

<table>
<tr><th>Two operators</th><th>One operator</th><th>Location</th><th>Type</th></tr>
<tr><td rowspan="10">Operator #1 stationed below Oakhill</td><td rowspan="10">Operator #1 stationed below Oakhill</td><td>Salem</td><td rowspan="3">main staging</td></tr>
<tr><td>Pocatello</td></tr>
<tr><td>Klamath Falls</td></tr>
<tr><td>Deschutes</td><td>Deschutes staging</td></tr>
<tr><td>Coos Bay</td><td rowspan="2">Siskiyou staging</td></tr>
<tr><td>Roseburg</td></tr>
<tr><td>Bear Creek</td><td rowspan="4">modeled station</td></tr>
<tr><td>Oakhill</td></tr>
<tr><td>Junction City</td></tr>
<tr><td>Redland</td></tr>
<tr><td rowspan="3">Operator #2 stationed at South Jackson</td><td rowspan="3">South Jackson Yardmaster (OS only)</td><td>South Jackson</td><td rowspan="2">modeled station</td></tr>
<tr><td>Browning</td></tr>
<tr><td>Toh Junction</td><td>tower</td></tr>
</table>

If crew size allows only one operator, that operator will copy all train orders and clearances for all locations, but the South Jackson yardmaster will perform OS duties for South Jackson and Browning. The South Jackson yardmaster will also take over as the Toh (top of helix) Junction towerman, making him very busy.

Train orders and clearances



BEAR CREEK & SOUTH JACKSON RAILROAD CO.

Train Order No. 8 6-13- 1952

TO C+E Engr DRGW 5101

AT Bear Creek

Engr DRGW 5101 Run Extra
Bear Creek To Junction City

This order annulled at 12:01 AM

Repeated at 6:41 AM. Signed RSK

Employees addressed must each have a copy of this order.

Made Com time 6:45 AM MDW

BCSJ

Before a train may leave its originating station or any other station where they have encountered a train order signal set to "red" (stop), they must receive a Form A clearance card listing all the train orders they should have in their possession and all the orders listed by that clearance card.

Figure 1 - train order No.8 creates Extra DRGW 5101 west

Copying train orders

When the dispatcher determines train orders are needed, he will call the operator(s) at the station(s) where the orders are to be delivered.

Dispatcher: Salem, 19 west, copy 1
Salem operator: Ready to copy

The dispatcher dictates the order number, the address, and the order body which the operator writes on the train order form.

What does *19 west, copy 1* mean?

"19 west" means the order will be given to a train headed westward and it should be delivered on a form 19 (if a form 31, the crew must sign for the order). If you are operator at a station with an operating train order (Oakhill), set the train order semaphore to "stop" for the specified direction (westward in this example).

You'll be making a single copy of this train order. On the prototype, you would have made copies for the headend crew (engineer), the caboose crew (conductor), and file copy for the station. On the BC&SJ we save trees and use a single copy per train.

When the dispatcher requests multiple copies use carbon paper for up to four copies. If the dispatcher says, "copy a bunch", make a single copy and we'll use the copy machine to duplicate it.

Once you have written the train order, repeat it back to the dispatcher and write the repeated time on the order. If your repeat matches what the dispatcher intended he will make it complete. Write the "com" (for completed), the time, the dispatcher's initials on the "signed" line, and your initials on the Opr line.

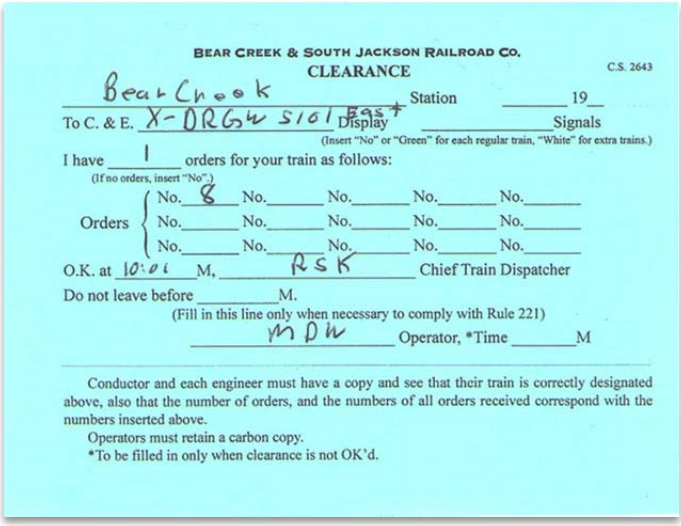
Addressing orders to multiple stations

Because you're wearing multiple operator hats, you may receive an order addressed to trains at multiple stations. For example:

> Order No. 18
> To: Extra SP 5317 east at Oakhill
> Extra SP&S 79 west at South Jackson
>
> Extra SP 5317 east meet extra SP&S 79 west at Mill Bend.
> Extra SP 5317 hold main at Mill Bend.

In this case the dispatcher should have directed you to make two copies of this order.

Clearing trains



BEAR CREEK & SOUTH JACKSON RAILROAD CO.
CLEARANCE
C.S. 2643

Bear Creek Station _____ 19__
To C. & E. X-DRGW 5101 Eqst Display _____ Signals
(Insert "No" or "Green" for each regular train, "White" for extra trains.)

I have 1 orders for your train as follows:
(If no orders, insert "No".)

Orders
No. 8 No. _____ No. _____ No. _____ No. _____
No. _____ No. _____ No. _____ No. _____ No. _____
No. _____ No. _____ No. _____ No. _____ No. _____

O.K. at 10:01 M, RSK Chief Train Dispatcher
Do not leave before _____ M.
(Fill in this line only when necessary to comply with Rule 221)
MDW Operator, *Time _____ M

Conductor and each engineer must have a copy and see that their train is correctly designated above, also that the number of orders, and the numbers of all orders received correspond with the numbers inserted above.
Operators must retain a carbon copy.
*To be filled in only when clearance is not OK'd.

Figure 2 - Form A clearance card for extra DRGW 5101 west

This dispatcher has dictated a train order, you repeated it back, and it's been made complete (figure 1):

> Order No. 8
> To: C&E Eng DRGW 5101 at Bear Creek
>
> Eng DRGW 5101 run extra Bear Creek to Junction City.

The crew of DRGW 5101 is anxiously hovering around, eager to be on their way. Can you deliver this order to them?

Nope! You need to wait for the dispatcher to request that you clear this train. When that happens it's up to you (the operator) to determine which orders (that you have) apply to that train and create a (Form A) clearance card.

The clearance card lists the station, date, train (extra DRGW 5101 west), that there is 1 order for it, and that order is order No. 8

Making OS reports

OS reports are how the dispatcher tracks the progress of trains around the railroad. In the prototype, each station operator reports trains at or passing their station. Some model railroads have the crews do their own OS reporting. The BC&SJ uses a combination of these.

What is an OS?

OS stands for on-sheet or off-sheet where "sheet" refers to the operator's record of trains through their station.

Making an OS report

The following example shows the Oakhill station operator OSing a train arriving at Oakhill:

> Operator: "Oakhill, OS"
> Dispatcher: "Dispatcher, go ahead Oakhill"
> Operator "Oakhill, OS extra SP&S 79 west arrived at 6:50am"
> Dispatcher: "OK, Oakhill, for OS on extra SP&S 79 west"

OS reports indicate a train as:

arrived – a train arrived at the station and won't be leaving immediately. Used when a train is terminating or has work at a station, or when the train must wait before departing.

departed – a train has departed the station. Used when a train originates at a station, has finished its work at a station, or when a train that has been waiting at a station departs.

by – a train passed through the station. Used for trains that don't stop or pause briefly at a station.

OSing at South Jackson, Browning, and Oakhill

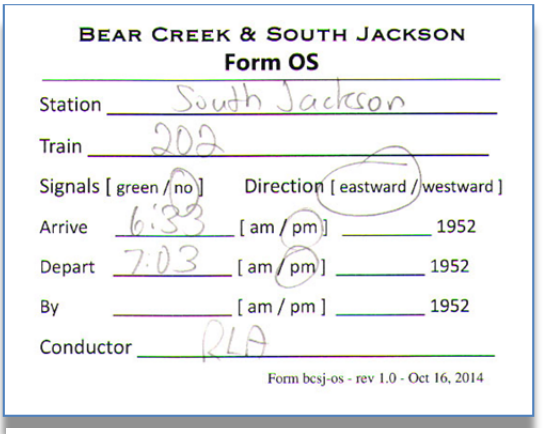
Trains in South Jackson, Browning, and Oakhill are visible to the station operator. The operator determines which train (talking to the crew if necessary) and makes an OS report.

> Operator: "Browning, OS"
> Dispatcher: "Dispatcher, go ahead Browning"
> Operator "Browning, OS second 203 west eng. 38 by at 5:10pm"
> Dispatcher: "OK, Browning, for OS on second 203 eng. 38"

If No.20 or No.21 is making a station stop when No.100 (reefer express) arrives, route No.100 through on the siding.

OSIng by ticket

OSing at stations other than South Jackson, Browning, and Oakhill is done by ticket. When a crew arrives, departs, or passes through a station other than one where an operator is sitting, they fill out an OS ticket, then hike to the nearest train order operator and present them with the ticket.



BEAR CREEK & SOUTH JACKSON
Form OS

Station South Jackson
Train 202
Signals [green / no] Direction [eastward / westward]
Arrive 6:33 [am / pm] _____ 1952
Depart 7:03 [am / pm] _____ 1952
By _____ [am / pm] _____ 1952
Conductor RLA

Form bcsj-os - rev 1.0 - Oct 16, 2014

Figure 3 - OS ticket for train No.202

When a train crew presents you with an OS ticket:

- Copy the OS ticket info to your OS record sheet.
- Make a diagonal line through the ticket once it's recorded on your OS record sheet.

- Wait for a break in the dispatcher's communication line chatter and make an OS report as if you were located at the station on the OS ticket.
- If several OS tickets arrive before you have a chance to speak with the dispatcher, make all the OSes one after another until they're all done or until the dispatcher needs to do something else.
- Cross out the entries in your OS record sheet as you make OS reports.

This has some advantages over crew making OS reports themselves:

- The crew doesn't need to wait at a phone (or radio) while another conversation is keeping the dispatcher busy. They drop off the OS ticket at the operator's desk and get back to running their train.
- The crew doesn't need to wait for an operator to have time to speak with them. They drop off the OS ticket and get back to running their train.

Using OS tickets has drawbacks:

- On the prototype crews weren't involved in making OS reports
- A crew member may need to take a walk down a crowded aisle to get to the nearest operator.
- With a one person crew, the train is stopped (at least it better be stopped!) until the engineer returns from dropping off the OS ticket.

Delivery of orders and clearances

Once you have all the completed train orders and the clearance for a train how do you deliver them?

If the crew for that train is hanging around just hand them to the crew. Otherwise you'll need to take the orders to the originating station.

For stations in main staging – Pocatello, Klamath Falls, Salem, and Toledo look for the train in the car card boxes for A-side or B-side staging. Fold the orders and clearance and place in the car card box for the train (along with its car card deck).

For Deschutes staging, clip the clearance and orders to the back of the car card deck.

For Siskiyou staging (Coos Bay or Roseburg) put the clearance and orders in the car card slot for the train.

For trains originating at Bear Creek or South Jackson give the orders to the yardmaster.

For trains passing through Bear Creek or South Jackson clip them to the fascia in front of the depot.

For trains at Browning, Junction City, Oakhill, or Redland, clip the orders to the fascia in front of the depot.

Train order signals

Eventually there will be lower quadrant train order semaphores in front of the depot for all modeled train order stations.

At this time only Oakhill has a working train order semaphore.

The Oakhill operator (at the desk below Oakhill) runs these semphores from the control panel at the rear of their desk (below Deschutes staging).

Normal signal aspect

Standard practice on the SP was to leave train order signals set to “red”. As a train approached the operator would determine whether orders were present for that train and if there were none they would clear the signal.

Because most of the operators on the BC&SJ can't see approaching trains very well, standard train order semaphore aspect is "green". A train order semaphore is set to "red" when the dispatcher starts dictating a train order.

If the train order is for a train originating at a station the train order signal may be left in "green" because that train can't leave until it has its clearance card.

Toh Junction Tower

When a session has two operators, the second operator sits below South Jackson and acts as the operator at South Jackson and Browning. They also act as Toh Junction Tower.

Toh Junction

Toh Junction is an interlocking at the top of the helix. It connects tracks leading to/from staging and South Jackson, Browning, and the Toledo branch with the up and down helix tracks.

Trains leaving main staging climb the helix and stop short of the junction. Their crews call your phone to request passage through the junction.

> Tower: "Toh Junction Tower"
> Crew: "Train 200 request route east to Browning"
> Tower: "Aligning the junction"

Double check their request comparing destination and direction, then if Toh Jct. is clear, select the "up" and Browning tracks on your control panel. Selecting the "up" track will cause the signal at the top of the helix to change to "green" and the crew stopped there can now proceed.

If the junction is already in use tell the crew of the up-hill train to "wait, traffic present". Once Toh Jct. is clear select the "up" and "Browning" tracks (giving a "green" at the top of the helix). Then press your call button to ring the top-of-helix phone and tell them they may proceed (in case the crew isn't paying attention to the signal).

Trains coming up from main staging through Toh Jct.

Trains east from Salem		Trains west from Pocatello or Klamath Falls	
PLE	20	PLW	21
RXE	100	BCXW	111
BCXE	110	BCHW	201
BCHE	200	SAHW	203
SAHE	202	DSHW	extra
CBHE	extra	GNXW	extra
GNXE	extra		

Default position of Toh Junction turnouts

When Toh Junction is not in use the helix "down" track should be selected. This will leave a "red" indication for the "up" trains (they're supposed to stop at top-of-helix even on a "green" but why take chances?)

It doesn't matter whether South Jackson, Browning, of the Toledo branch is selected on the other end of the junction.

Toh Junction train register

Toh Jct. Tower maintains a register that records the identification, signals, and times of trains passing through Toh Jct. on their way to main staging.

This information may be needed by the crews of trains departing Salem (main staging) eastward to Browning to determine which track in Browning they may occupy.

Hints and tips

- When copying a train order or filling out a Form A clearance card write legibly. An order isn't much good if train crews can't read it!
- Keep an eye out for trains arriving at your primary station(s) so you can OS them without requiring their crews to fill out an OS ticket.
- Make OS reports as promptly as possible. The dispatcher is "blind" without them.
- When running Toh Junction Tower leave the "down" track selected when Toh Junction is not in use.