

## **Chapter 9 – First Operating Session**

In The Recipe Book at the end of the Car-orders section, there is a portion of text titled "Optional Data". The first line in that portion states "From here you can skip to 'Operate'. You can operate without entering or assigning locomotives and cabooses" and that is just what we are going to do. Before we proceed if you haven't already done so, print out the reports in Appendix G as we'll refer to many of them as we run this session.

### **Zone Printing**

Build 264 introduced a new feature – the ability to print to several printers on a network. This feature is very useful when ProTrak is used on a large layout and allows documents to be printed at the location where an operator will be. For instance, in our demonstration railroad, we could have printers located at each of the staging yards as well as at Actonvale. When a train from East Staging reaches Actonvale the operator of that train is likely now close to Actonvale as well. If the operator needs a report printed, that report could be printed at Actonvale rather than at some distant location that he or she would have to go to in order to retrieve the report.

Before we look at "Zone Printing", we need to define some terms. There are two major reports that train crews use – one which covers the cars in the train and one that details what cars are to be set out and where. While you may be familiar with any one of a number of terms for these two reports, we'll use the term "Switchlist" to mean the cars in the train report and we'll use the term "Cutlist" to mean the report of cars to be set out.

If you have not yet upgraded to Build 264 (or later), or if you have only one printer you can skip the remainder of this section and go on the "Operating Session On Paper Only", later in this chapter.

Let's look at what actions are required in order to set up the printers for the zones on the ProTrak Demonstrator railroad.

1. From the ProTrak toolbar, click on "Administration" then select "Switchlist format" from the dropdown list. After ProTrak does some setup, a window like Figure 9-1 will appear.

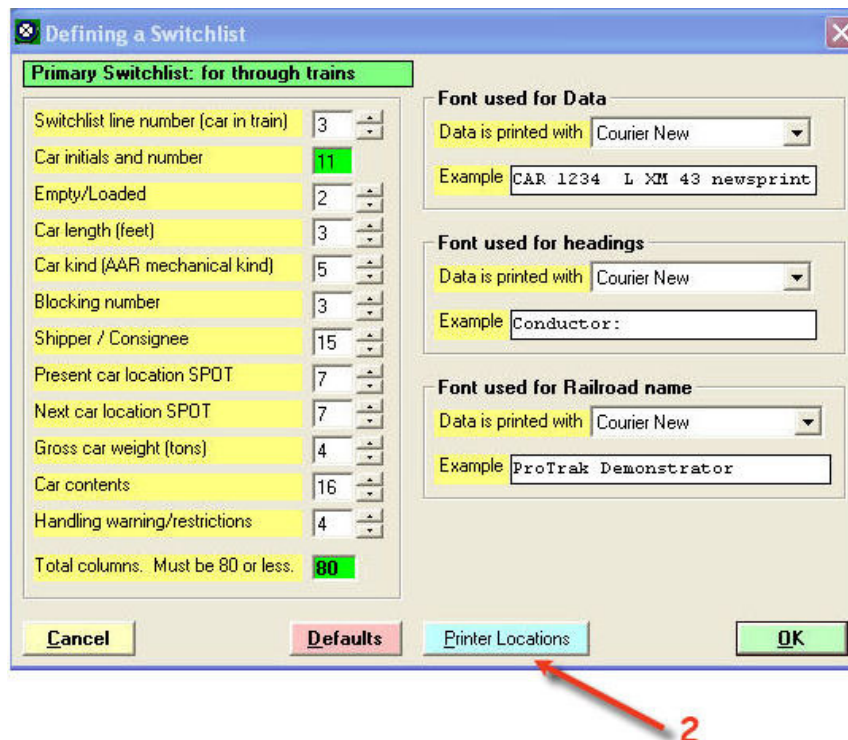


Figure 9-1

2. The "Defining a Switchlist" window gives us the ability to define how much data we print in each column of the report, as well as what font we want used for the various areas on the switchlist. For now, we'll leave those as is. There is one other feature that the "Defining a Switchlist" window gives us access to - the zone printing Feature. Click on the button labeled "Printer Locations" which can be found at the bottom of the "Defining a Switchlist" window and a new window like the one shown in Figure 9-2 will appear <sup>(1)</sup>.

<sup>1</sup> Note that the "Printers at Stations" window is opened on top of the "Defining a Switchlist" window, and since the "Printers..." window is larger than the "Defining..." window, the later is hidden. As with all windows, you may move the "Printers..." window if you wish to reveal the "Defining..." window.

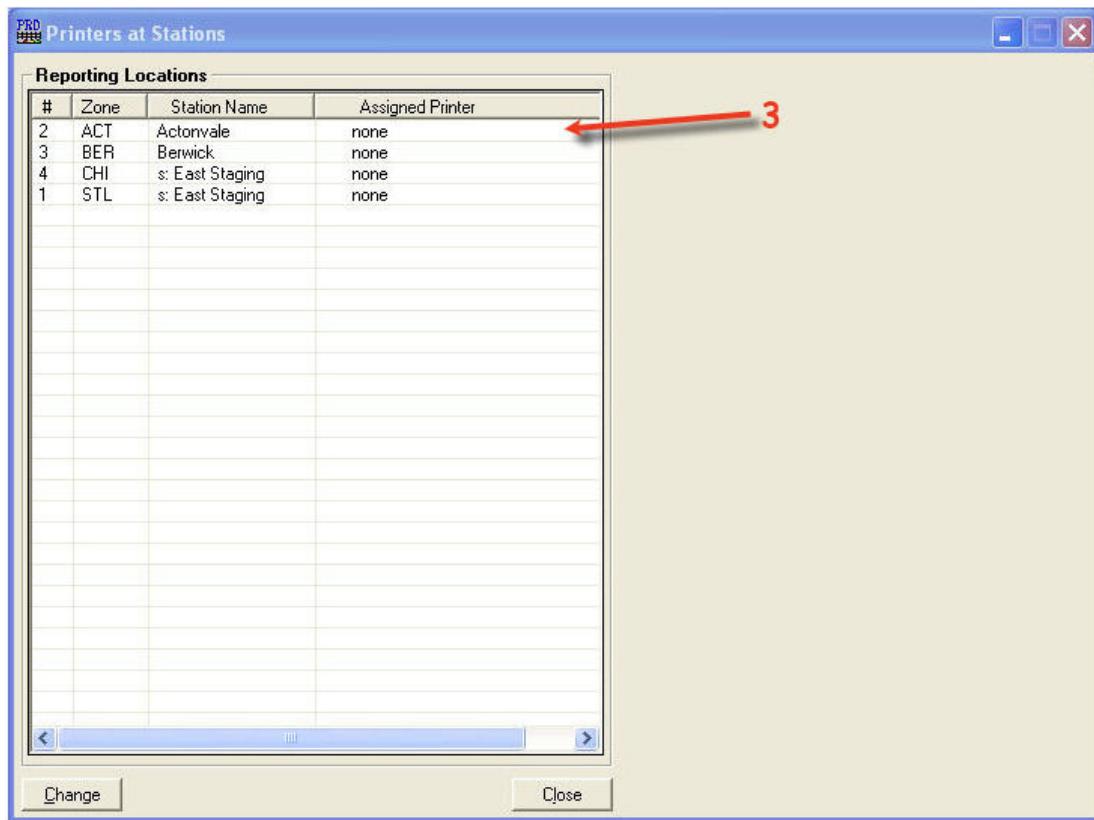


Figure 9-2

3. As you can see we have the ability to set up printing at two of the staging tracks <sup>(2)</sup> in East Staging as well as at Actonvale and Berwick. At present there are no printers assigned to any of these locations <sup>(3)</sup>. We'll set up a printer for Actonvale. Click on the first entry – Actonvale and then click on the "Change" button at the bottom of the window; the window will change to look like Figure 9-3 where, as you can see, there is an additional data area in the right hand panel.

<sup>2</sup> If you're wondering why only two of the staging tracks show up, it is because there are no trains setup to go to the others. The same reason applies when it comes to the other stations – no trains work those stations.

<sup>3</sup> If you have more than one printer available to your computer, by default your reports will print to the printer which has been set up as the default printer in Microsoft Windows.

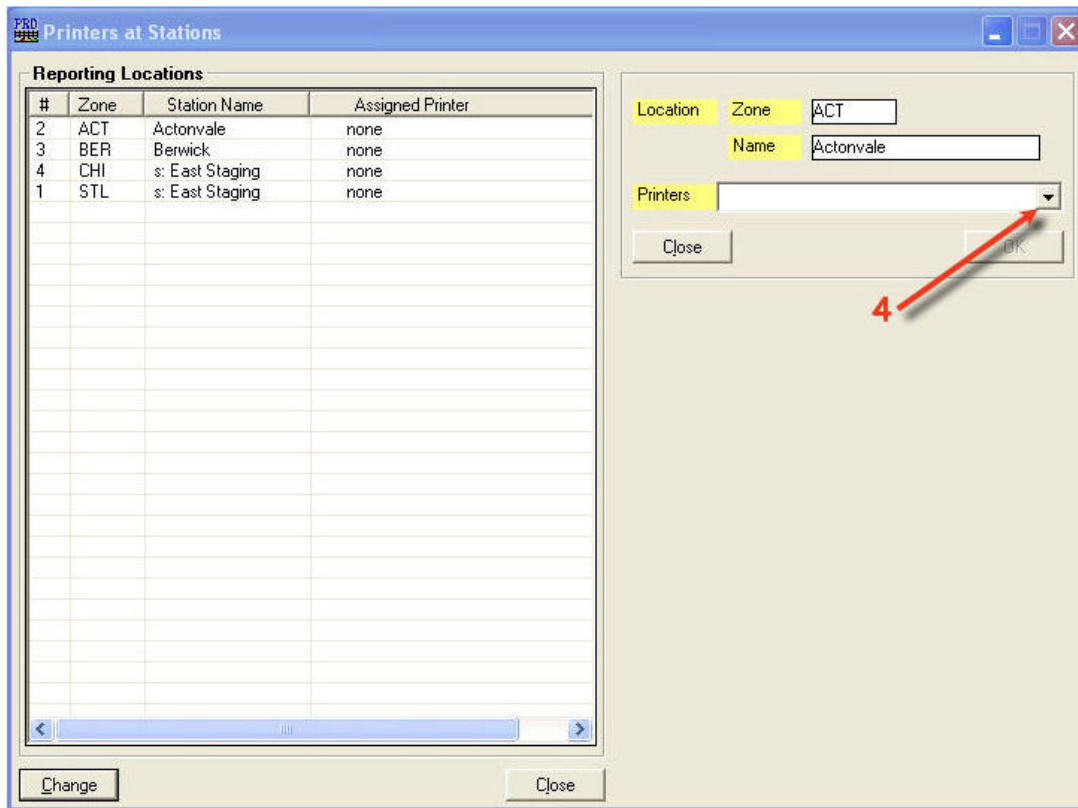


Figure 9-3

4. Click on the down arrow beside the "Printers" data field and a list of all of your printers will appear. Choose the printer you wish to have reports for Actonvale printed at. My computer only has one printer, an HP1200 series printer, so that is the one I have selected. Your printer will likely be different, so choose an appropriate printer from your list. Your window should now look like the one in Figure 9-4 – of course unless, of course, you also have an HP 1200 series printer, your printer will be different.

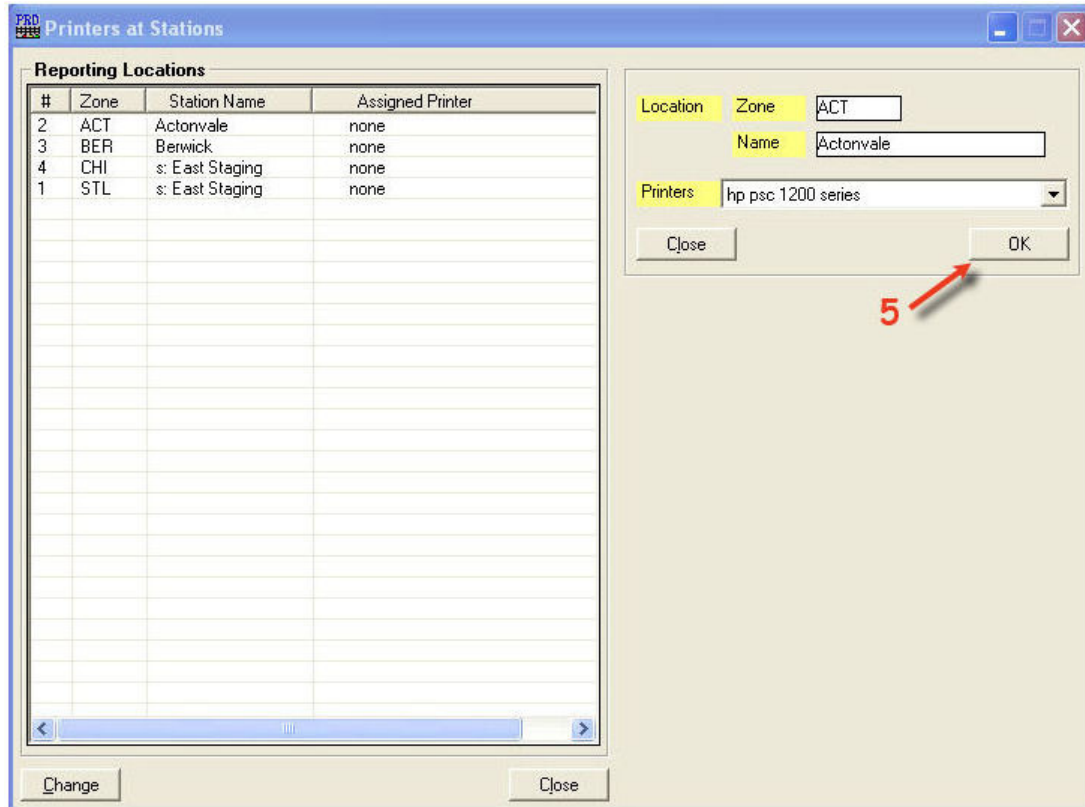
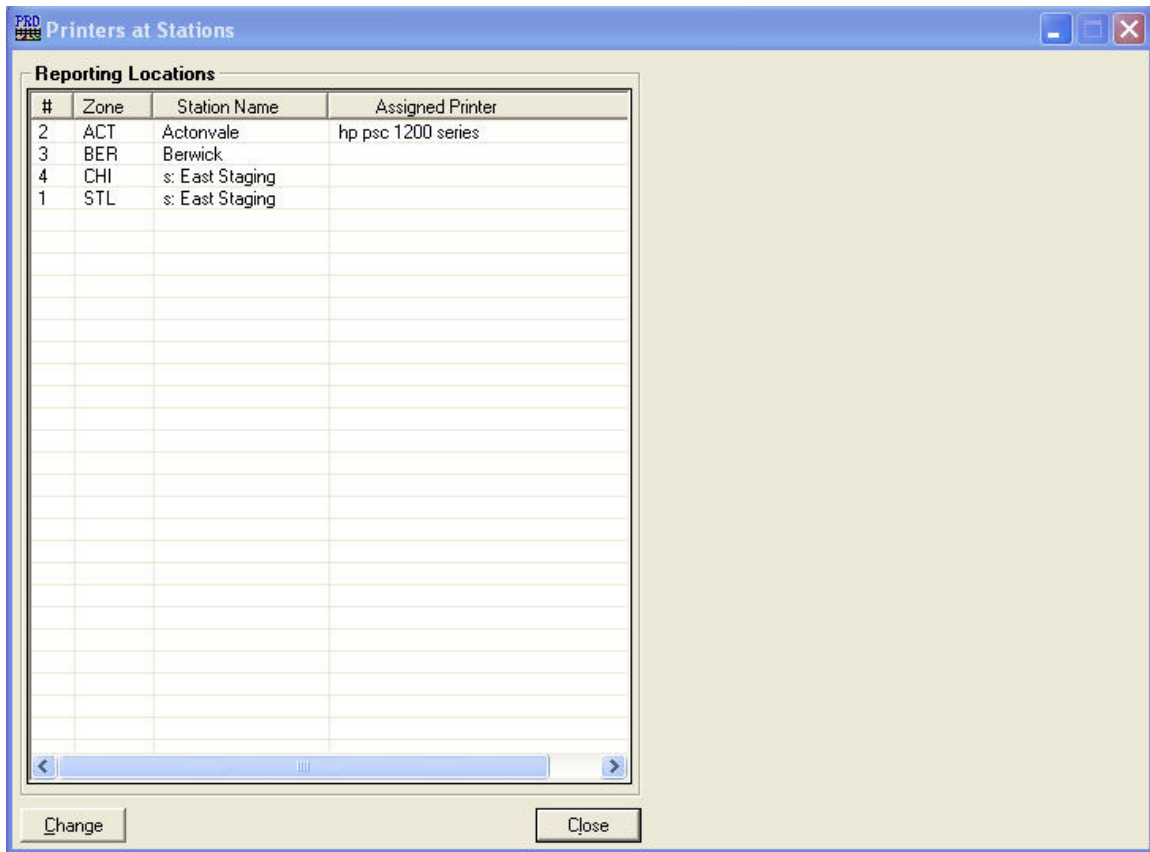


Figure 9-4

- Click on the "OK" button and the printer (the HP1200 series in my case) has now been assigned to print the reports for Actonvale. Figure 9-5 shows the "Printers at Station" window after we've assigned the printer for Actonvale.



*Figure 9-5*

6. Repeat steps 3 thru 5 for the other locations. Two things to note:
  - a. First the printer selected previously is the printer that becomes the default printer for the next location. In my case, this was the HP1200 series. You must still click on the data field down arrow and select the printer again to enable the "OK" button.
  - b. Second it is not necessary to physically have a separate printer for each location. You may, as I have done, assign the same printer for every location. This is logical if you have no networked printers, or if your layout is small.

Figure 9-6 shows the window after all zones have been updated.

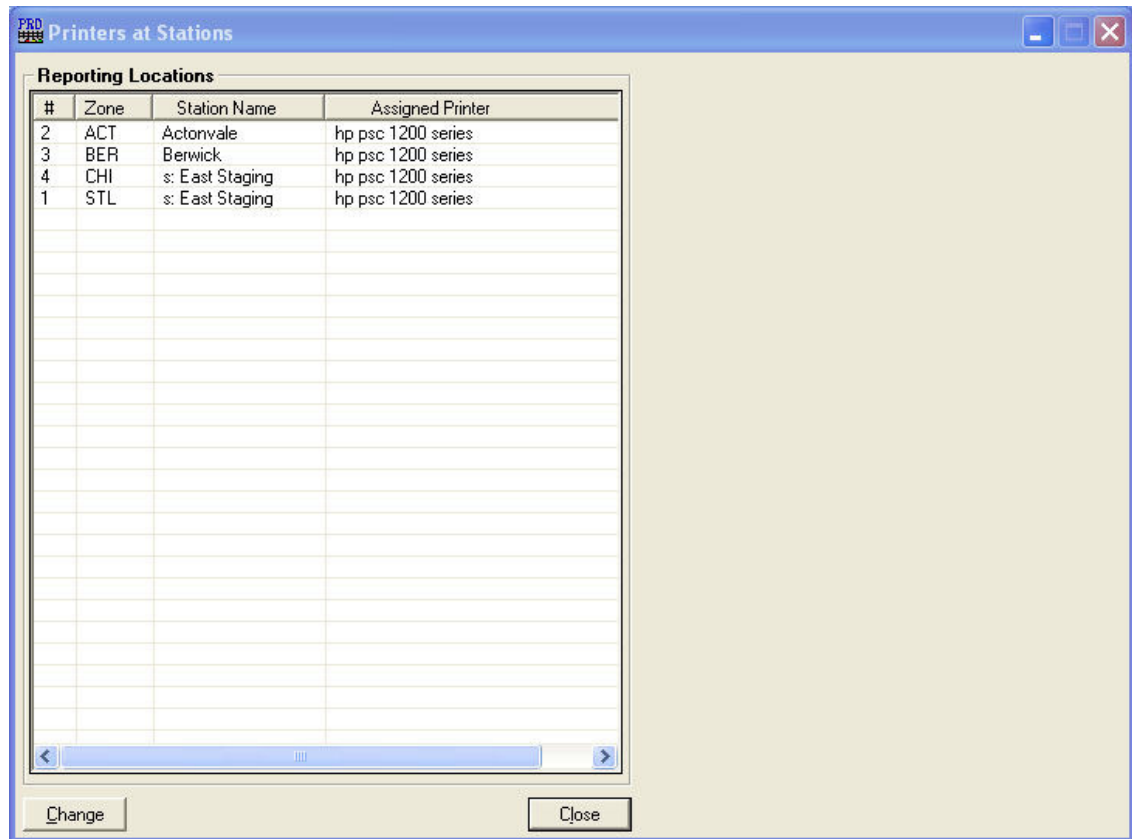


Figure 9-6

- Click on "Close" to close the "Printers at Stations" window and then click on "OK" to close the "Defining a Switchlist" window.

Now that we've got printers assigned, we can continue on the run a session.

## Operating Session On Paper Only

From The Recipe Book:

"The basic mechanics of "Operations" is (are):

- Printing switchlists, or reprinting switchlists
- Reporting trains
- Printing yardmaster lists"

We're going to start running an operating session, but on paper only. We don't actually need to physically move any cars – just run the paper session and see what ProTrak indicates has happened. Since there will be reports printed as we work through this chapter, make sure your printer is ready to print.

There are a couple of reasons to run "paper sessions" when you first start up.

1. The program starts with all of the cars in the default yard. On your own railroad, this may in fact prove to be impossible since there is not enough space on the yard tracks to hold all of the cars you have. You need to get the cars spread around the railroad.
2. It takes a minimum of 3 sessions to start to see any loaded car movements.

In light of these (and other) reasons, you may as well use the computer to "age" your railroad.

Before we start you need to understand that what will be described in the balance of this chapter and in Chapter 10 is what happened when I ran the various sessions. If you actually do as I will describe you may well discover that there are variances in the number of cars in a particular train, etc. This is to be accepted as normal.

OK, let's get started.

1. Occasionally, you may receive the message "New train lineup needed". If you didn't get that message, proceed to step 2. If the message did appear, do the following:
  - a. Click on the "Yes" button on the "New Train Lineup needed" window.
  - b. Click on the "OK" button on the "Going to Train Lineup" window.
  - c. If the "Some trains do not run today" message appears, click on "OK".

The train lineup has now been updated.

2. On the ProTrak tool bar, click on "Transportation", then click on ""Operations", Run an Operating Session" from the dropdown list. You should see the "Operations Pre-Processor" window which looks like the one in Figure 9-7. Note that, depending on the size of your railroad, the pre-processor process may take a few moments to complete so please be patient.



The screenshot shows a window titled "Operations Pre-processor". On the left, there is a yellow tab labeled "Car movement plans". To the right of this tab is a list of items with corresponding input fields:

Session	26
The loading/unloading points	9
Verifying train consists	3
Routing empty cars home	3

An "Exit" button is located at the bottom right of the window.

Figure 9-7

## Adding Car Routing

3. If the pre-processor comes across any cars where it cannot find the routing to the car's home region, a window similar to Figure 9-8 will be displayed. The subject of Gateways was briefly discussed in Chapter 3 and that section contains the following statements: "The gateways file that comes with ProTrak has the connections required to allow routing to occur. ProTrak will find cars with no routing and prompt you to either add the railroad for that car or ask you to enter a default (temporary) routing." If the "Gateway railroad connection required" window (Figure 9-8) never appears, go on to the section in this chapter headed "Operating Session Continued" (step 10).

Figure 9-8

4. As you can see, ProTrak has discovered that it cannot route the GSVR car. As you may recall from Figure 7-21, since the reporting marks "GSVR" did not exist in the list of railroads in the right hand panel (Railroads in Official Guide), we manually added "GSVR" as the reporting marks for gondola 327155. ProTrak only knows about railroads in the "Official Guide" supplied with ProTrak. By adding GSVR you are adding it to your version of the Official Guide. We'll now add the routing to get car GSVR 327155 back to its home railroad at this time.
5. Click on the "Railroad name" data field and enter "Galveston Railroad, L.P.".
6. Since this is a "Railroad owned car", not a "Private Owner car" (i.e the reporting marks do not end with an 'X'), we need not change the radio button that now has "Railroad owned car" selected.
7. Click on the dropdown arrow beside the "Routed through staging track" data field and select "STL03s" from the list. We'll use this staging track since the "Galveston Railroad" is located in the southwest of the US.

Once you've completed these tasks the window should look like the one in Figure 9-9.

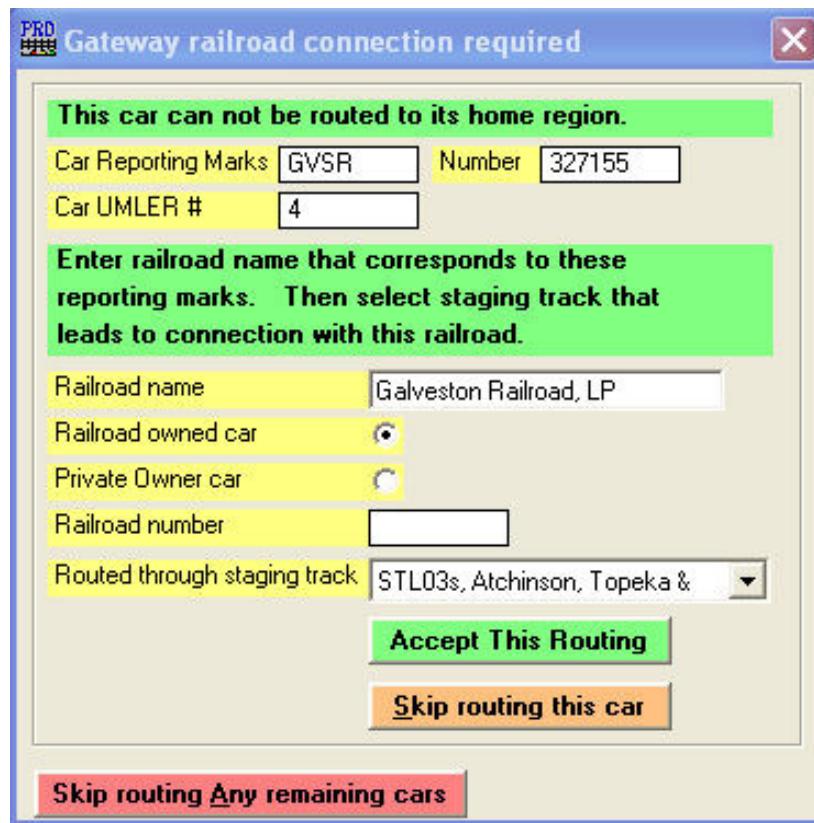


Figure 9-9

8. Click on the "Accept This Routing" button to complete the addition of the routing.
9. ProTrak has also detected other cars that need routing entered for them for the same reason mentioned previously for the GVSR car. The details are shown below:
  - a. MRL – "Montana Rail Link" thru "SEA01s".
  - b. SSAM – "Sault Ste. Marie Bridge Company" thru "CHI02s".
 Just follow steps 5 through 8 (they're all "Railroad owned") to enter the routing for these railroads.

## Operating Session Continued

10. Once the pre-processor has completed its work, the window shown in Figure 9-10 will be shown.

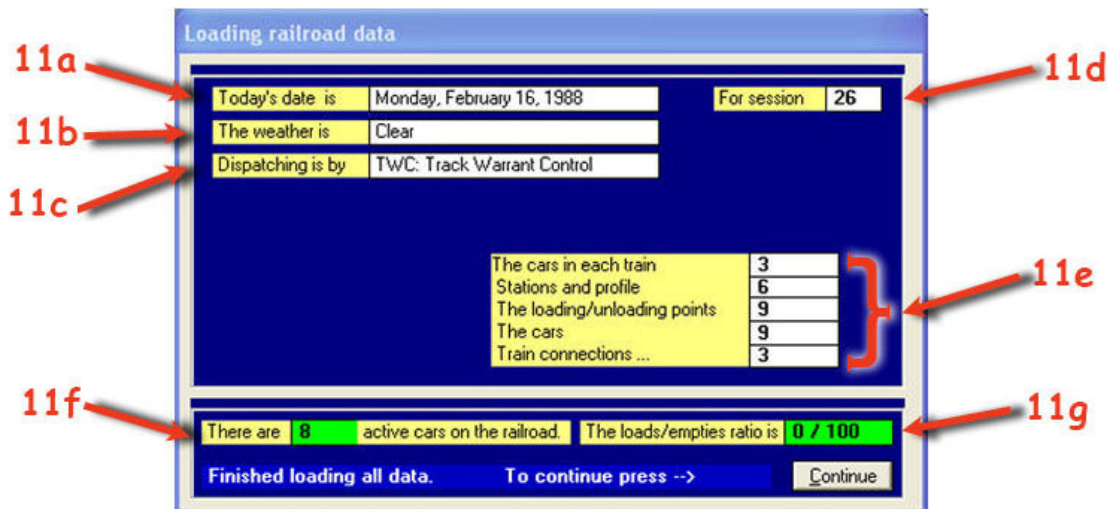


Figure 9-10

11. The "Loading railroad data" window is for "information only" but let's look at the fields shown and discuss where that data came from and whether it can be changed.

- a. If you are using "computer dates" then "Today's date is" the date the Daily Summary was last run, not today's actual date <sup>(4)</sup>; Step 15 will show you how this can be changed.
- b. "The weather is" is also self explanatory; Steps 17 and 18 will show you how this can be changed.
- c. "Dispatching is by" describes how the trains are dispatched. Again, steps 17 and 19 will show you how this can be changed.
- d. "For session" is the session number for the current session. ProTrak automatically increments this number when the end-of-session process is run. We'll talk about the end-of-session process later. You can reset the session counter to any value between 1 and the value shown and we'll look at how to do that in step 16.
- e. The following items that have been counted or computed by ProTrak using data you've previously entered <sup>(5)</sup>:
  - i. "The cars in each train" – this is a count of all cars divided by the number of trains
  - ii. "Stations and profile" – this was obtained from the station data you entered in Chapter 2 (See Figure 2-11)

<sup>4</sup> If you ran a Daily Summary today, let's say it's April 24<sup>th</sup>, and don't run another Daily Summary until April 30<sup>th</sup> the date will still be shown as April 24<sup>th</sup>.

<sup>5</sup> Here's a comment from Jim Moir: "Some of these data fields are filled in three or four times as the program reads in related data. Those displays are just there to show people that the program is busy 'doing stuff' and is not 'locked up'.

- iii. "The loading/unloading points" – this is a count of all customers
  - iv. "The cars" – this was obtained from the car data you entered in Chapter 7 (See Figure 7-33)
  - v. "Train connections" – this was obtained from the train data you entered in Chapter 5.
  - f. "There are 8 active cars on the railroad" is a count of the number of cars entered less any car which is flagged as being inactive or not in service. As you can see the "The cars" display above shows there are 9 cars, but we can see that only 8 of them are shown as being active. If you remember in Chapter 7, Figure 7-33, we added car 9 and then deactivated it. This car is counted in the count of cars ("The cars" data field), but not in the count of active cars. Always remember that ProTrak only uses the active cars during operations.
  - g. "The loads/empties ratio is" data field shows what portion of all the cars moved are loads and what portion of them are empty <sup>(6)</sup>.
12. To exit the "Loading railroad data" window, click on "Continue". One of the things that you should notice is that the ProTrak toolbar has now changed. We'll refer to this new toolbar as the ProTrak Operations Toolbar and in future we'll refer to the toolbar that is displayed when we're not in operations as the ProTrak Standard Toolbar. This will hopefully minimize confusion. The second thing to notice is the display of a clock on the screen as shown in Figure 9-11. This shows the "current" time – the fast clock time.



*Figure 9-11*

13. We can change a number of items relating to the operating conditions on the railroad, some of which were described in step 11. To make those changes, we need to exit operations <sup>(7)</sup>. Exiting from operations is accomplished by selecting "Operations" from the ProTrak Operations

<sup>6</sup> The reason for the "0/100" ratio at this time is that there are no loads – all of the cars are empty returning to the staging track representing their home railroad. Note that on initial startup of a new railroad, ProTrak takes at least 5 sessions to "ramp up" and give good statistical data.

<sup>7</sup> You will note that you cannot exit ProTrak by clicking on the red "X" in the upper right corner of the window without first exiting Operations. This is done deliberately to keep files in sync and properly updated. You must **NEVER** use CTRL-ALT-DEL to exit Operations. Doing so will leave data out of sync on the next startup of operations.

Toolbar then selecting "Exit operations" from the dropdown list. You will be asked to confirm your choice (Figure 9-12) and we'll click on "Yes".



*Figure 9-12*

You may see some other windows briefly appear as ProTrak completes the operations shutdown. Once we have exited operations you will notice that the toolbar now displays the ProTrak Standard Toolbar.

14. Remember that we are not going to change any of the items shown in Figure 9-10 so when you are in one of the windows mentioned below, make sure to click on "Cancel" to ensure the data is not changed.
15. "Today's date is" can be changed by clicking on "Administration" on the ProTrak Standard Toolbar then selecting "Era, Date & Minimum Rates" from the dropdown list. Figure 9-13 shows what that window looks like. You will see that the operating date is comprised of the first three data fields (year, month and day). By default, ProTrak uses "computer dates" for both the month and day. If you do not have the "Use computer date for month" and "for day" check boxes enabled, please do that now. Your dates may differ from what you see in Figure 9-13 depending on what version of ProTrak you are running. If you had to enable one or both of the "computer date" check boxes, click on "OK", otherwise click on "Cancel" to close the "Era, Date & Minimum Rates" window.



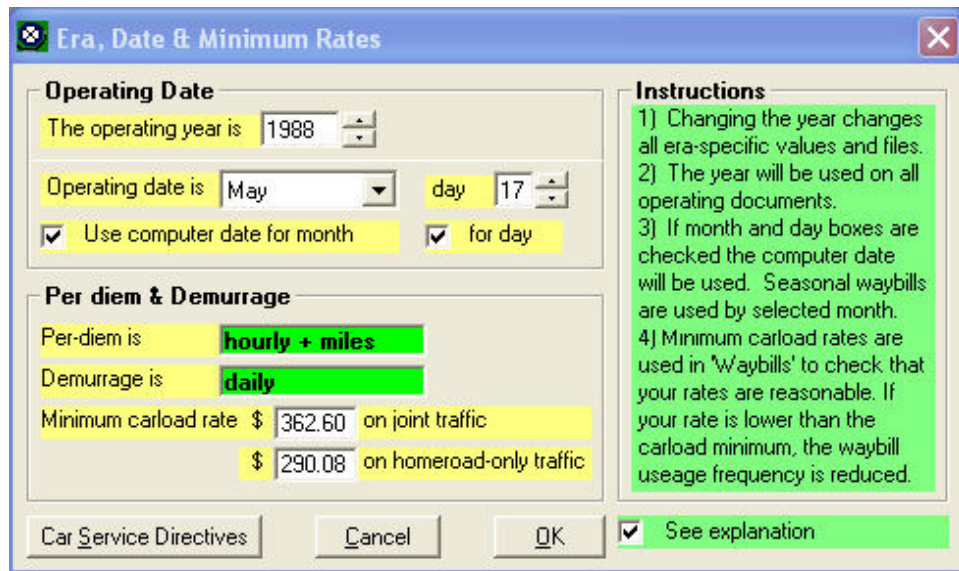


Figure 9-13

16. "For session" can be changed by clicking on "Administration" on the ProTrak Standard Toolbar then selecting "Reset session counter". Figure 9-14 shows what that window looks like. While we will not do it, if you were to enter a different value for the Session Counter and then click on "OK" ProTrak would reset the session number <sup>(8)</sup> to the value you entered and a window like Figure 9-15 would appear. This window shows the financial results of the selected session. If this session has never been run, the graph will be blank as is the case with the example in Figure 9-15. Click on "Cancel" in the "Resetting Session Counter" window to close it. Click on "Close" to close the "Financial Summary Window."

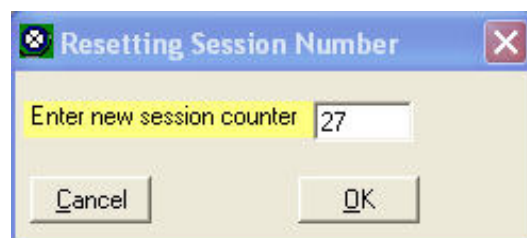


Figure 9-14

<sup>8</sup> For information purposes only: resetting the session number does only that. It does not relocate any cars.

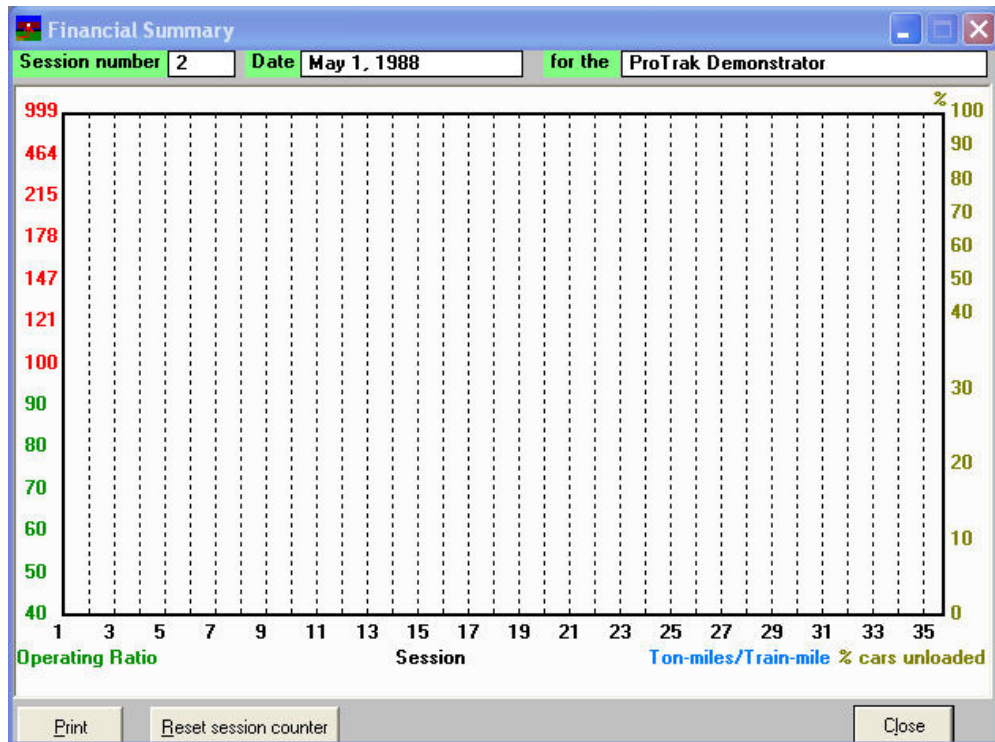


Figure 9-15

17. From the ProTrak Standard Toolbar, click on "Transportation", then select "Today's Operating Conditions" from the dropdown list. The window in Figure 9-16 will appear.



**Today's Operating Conditions**

**General**

Today is, using the schedule of trains for **Monday**

The weather is forecasted to be **Clear**

FRA track class is: **3** Maximum train speeds are: **40** mph freight  
**60** mph passenger

Today, the Rules Examiner is **Visitor0**

**Dispatching**

The method of train dispatching is **TWC: Track Warrant Control**

ABS signals are in use on **Middle** ☐ Yes ☒ No

**Train crews**

Apply Hours of Service Law of **24** hours in **1988** to crews? ☐ Yes ☒ No

Crew sizes are: **4** men on through trains **4** men on switching trains

**Train weight**

Train weight is scaled by train length in cars. Era average-train-length is: **70** cars.

Average train length (cars) **35** so each car's weight counts as **2.0** cars.

Car factor (Equated Tons) is based on an 'design' operating speed of **40** mph.

Outside helper zones, if a train is too heavy: ☒ number of cars is reduced.  
☐ more motive-power is assigned.

**Switching**

At customer spurs, switching is done by turn ☒ for both trailing and facing points.  
☐ for facing points on return only.

At yards, the cut-off time between arriving and departing cars is **120** minutes

**Fuel and Water**

☐ Automatically print "out-of-fuel or water" notices

**Cancel** **Apply**

Figure 9-16

18. The item we looked at in step 11b was "The weather today is". Figure 9-16, in the section headed "General", the 2<sup>nd</sup> item (labeled "The weather is forecast to be") has a dropdown list to select a condition. Click on the dropdown list to see the conditions you may select. Make sure it remains on "Clear" when you leave.
19. The item we looked at in step 11c was "Dispatching is by". Figure 9-16 in the section headed "Dispatching"; the 1<sup>st</sup> item (labeled "The method of train dispatching is") also has a dropdown list to select how trains are dispatched. Again use the arrow to look at the options but make sure it remains as "TWC ..." when you leave.
20. We won't look at any of the remaining data fields at this time; we need to get back to running a train. Click on "Cancel" to close the "Today's Operating Conditions" window.

21. Again, on the ProTrak Standard Toolbar, click on "Transportation" then select ""Operations", Run an Operating Session" from the dropdown list. You should see the "Operations Pre-Processor" window but you should not see any of the routing errors we saw previously since we've already dealt with them. Again, the window shown in Figure 9-10 will be displayed so click on the "Continue" button to move on.

## Switchlists

In order that the crews on our trains know what cars to pick up or set out, they need some sort of list. As is the case with the prototype railroads, ProTrak produces such a list. While we'll use the term "Switchlist", ProTrak has the capability to allow the user to change this term <sup>(9)</sup>. Before starting an operating session we'll print out all of the switchlists for the current session <sup>(10)</sup>. While this may seem like a 'no-brainer', remember to make sure that the printer or printers that are to be used are ready to print (printer is turned, paper is loaded, etc.).

1. If you only have one printer, you can skip step 2 and go on to step 3.
2. On the ProTrak Operations Toolbar, click on "Operations" then look at the entry labeled "Use networked printers" <sup>(11)</sup> in the dropdown list <sup>(12)</sup>. If this entry does not have a check mark in front of the entry, click on it to enable that feature. The dropdown list will disappear once you enable or disable this feature. If the entry has a check mark in front of it, click on some other portion of the window to close the dropdown list. If you want to check to see that this feature is enabled, click on "Operations" and look at the entry in the dropdown list. If there is check mark in front of the "Use networked printers" entry, it is enabled. Remember, you have to enable the "Use networked printers" option every time you start an operating session.

---

<sup>9</sup> If, on your own railroad, you want to change the name of the switchlist, on the ProTrak Standard Toolbar click on "Administration", then select "Definitions and Terminology" from the dropdown list.

<sup>10</sup> It is possible to print/reprint a switchlist during the session. On a larger railroad the conductor of each train may wish to print/reprint the switchlist for their train with their own name shown as the conductor.

<sup>11</sup> The "Use networked printers" entry will only appear if you have defined a printer as the "Assigned Printer" for at least one of the yards or staging tracks.

<sup>12</sup> The term "networked" applies when you have one than one printer attached to your computer, whether on a network, on USB ports or any other means of connecting more than one printer to your computer.

- On the ProTrak Operations Toolbar, click on "Switchlist" <sup>(13)</sup> then select "Print a Switchlist" from the dropdown list. You will see a window like the one in Figure 9-17 <sup>(14)</sup>.

[illegible]

*Figure 9-17*

- Let's look at some of the information that is provided for each train. For each train, you can see the train symbol (Symbol) followed two columns to the right by the departure time (Departs), the direction the train is traveling (->) <sup>(15)</sup> and the departure location (Location). The next column "Status" is blank, but as the session progresses, this will be updated by ProTrak. The next column (Nxt Yard) shows where the train will go to next, followed by information on the cars in the train (Cars, Pick, Xtra). If we look specifically at train SLCH we can see that it departs from staging track STL03s at 1:01 am. The next location for this train is Actonvale Yard (ACT-Yd) where it will pick up 5 cars (your window may show more or less cars). These 5 cars are cars that we entered in Chapter 7 and they will be used to fulfill the car-orders that we set up in Chapter 8.
- Double-click on the first train in the list (SLCH). The first thing you will notice is a progress bar at the bottom of the window labeled "Blocking". While this is displayed, ProTrak is ordering the cars according to our blocking order (remember the "Cars blocked at" data field in Figure 6-2).

<sup>13</sup> The “Switchlist” Item is the fourth one from the left in the ProTrak Operations Toolbar. If you have made any changes to the Program Options Settings as discussed in Chapter 1 and in Appendix H, this item may have a different label.

14 You may reposition the window to any location you choose. "Operations" opens a lot of windows and you may want to put each window where you want it. The Operations windows will stay where you put them.

<sup>15</sup> The “-” in the column headed “->” indicates this is what ProTrak calls a ‘local’ move. In this case it means the train goes from East Staging to ACT-Yd and back to the East Staging

Once the blocking process has completed the window shown in Figure 9-17 will be updated. Figure 9-18 shows the updated window.

#	Symbol	Op RR	Departs	->	Location	Status	Nxt Yard	Cars	Pick	Xtr.
1	SLCH		1:01 AM	-	STL03s	Closed	ACT-Yd		5	
2	202		7:00 AM	E	ACT-Yd		BER02y			
3	CHSL		9:00 AM	-	CHI02s		ACT-Yd		2	

Figure 9-18

6. You will notice that three things have happened:
  - a. The switchlist for this train has been printed. Depending on how you have your printing set up (See "Zone Printing" above) the switchlist will print to the printer defined for the staging yard where STL03s is located or the default printer as defined in Microsoft Windows if you have not set up any "networked" printers<sup>(16)</sup>.
  - b. The two buttons at the bottom of the window, "Switchlist" and "Report", have been enabled.
  - c. The "Status" data field now shows "Closed"<sup>(17)</sup>. This means that:
    - i. The switchlist has been printed.
    - ii. No more cars can be assigned to this train.
7. The switchlist for SLCH is in Appendix G as Figure G-1. Let's look at how we can use the switch list. We'll use the term "header" to mean the area of the switchlist above where the individual cars are listed and the term "footer" to mean the area on the page below where the individual cars are listed. Some of these fields will be blank due to information we have not yet entered into ProTrak (e.g. engine numbers), but we will consider how the data could be used if it was present.

<sup>16</sup> When you look at the printed switchlist, you will see that it shows today's month and year. If you look back at Figure 9-13, you will see in the section marked "Operating Date" that there are two check boxes marked "Use computer Month ... Day". These are both checked. The reason for printing the real month and day is that if you have more than one copy of a switchlist, you can determine which is the most current. This may happen if you continue to run sessions as "Monday" and don't destroy older copies of the switchlist(s).

<sup>17</sup> In addition to "Closed", you may also see "Pending", "Classify" and "Hold". We'll discuss these later

- a. If you are assigning crews using ProTrak, something we've not looked at yet, you can use the "Conductor" information, along with the "Train #" information to make sure you've got the right switchlist.
- b. If you have a dispatcher position on your railroad, you can use the train symbol and location to tell the dispatcher who you are ("Train # ..." and "at ..." information in the switchlist header. Note that the date is part of the Train # information <sup>(18)</sup>).
- c. You can use the routing information to locate where you are, where you are going, where you will do work and where you will pick up your next switchlist ("Origin", Next Yard and Destination in the header and "Pickup new switchlist at:" in the footer).
- d. You can use the equipment information to identify your train and, if applicable, to set your DCC controls. Make sure all the assigned equipment is on the train ("Throttle #", "Engine" and "Cabin" in the header).
- e. Use the orders and clearance information to know whether you are cleared to occupy main track and what restrictions you may face ("Clearance #", "# of Orders", "Call time" in the header and the information in the "EXCEPTIONS" area in the footer of the switchlist).
- f. Use the car listing information to identify cars, where you will find them and what you are to do with them (The area below the header information).
- g. Use "SPOT" to identify where the car is currently located and the "Consignee" and "NxtLoc" to identify who the car is destined for and what location it will be sent to.
- h. Use the car kind (the column headed "KND") to further help identify cars, and to identify any related restrictions.
- i. Use the car length (LG) to identify cars and check clearances at tight curves or customer spurs.
- j. Use the car empty/loaded (E) to identify blocking issues, especially cars for customers that have been blocked out-of-block because of train dynamics or lading restrictions.
- k. The "B#" field provides additional information for the user to use, at their discretion, to indicate where a car is going.
- l. Use the car gross weight (Tons) to identify where your train will start to speed up on cresting a grade.

---

<sup>18</sup> It is important to note that while the month and day are the real date values, the year is taken from the "Era, Date and Minimum Rates" window. Since our "Operating year" shows 1988, all of our reports will show a year of 1988 with some showing the month and day from the actual current date and other the month and day from the "Era, Date and Minimum Rates" window (in our case this is February 16). Also remember that the day-of-the-week will show the day that was set when the last end of session process was run. In our case this will always be Monday.

- m. Check the column under the "Hdg" label for handling information - light or heavy cars or other special handling.
  - n. The "...4 mph..." warning is printed if you are doing any switching, either at yards or at customers
  - o. The "Movement on other than main tracks..." warning is printed if you are doing local switching (see Figure G-2).
  - p. Use the train length ("Total Length" in the "CARS" area of the footer) to know what sidings your train will fit into, or which arrival tracks you must use.
  - q. Use the train weight information ("Total Weight" in the "CARS" area of the footer) to know how your train will handle on grades. If you are using "drive-by-wire", this weight is used in calculating train speed. This weight will give you guidance about how your train will bog down on up grades and speed up on down grades.
  - r. Use the tractive effort numbers (in the section labeled "DYNAMICS" in the footer) to indicate whether you need more locomotives on your train to avoid stalling. Insist on more units unless a helper is assigned.
  - s. If helpers are to be used, use the helper location to place the helper locomotive within the train according to operating instructions. The helper station warning indicates where on the route a steep grade limits car-in-train stability if a helper is not used. Stringlining of cars likely will occur at some point beyond the indicated location. Insist on a helper or set off cars to reduce train length and tractive effort.
  - t. Use the "Pick up next switchlist at..." message (in the footer) to identify where to report the train and pick up a new switchlist. This message may also be an indication of a location where you will/can do a lot of yard work. The train will be re-blocked at this location.
8. As you can see, the switchlist provides us with a lot of information to help us move our train from one place to another. Let's look at the switchlist we printed for SLCH. We'll use the references in point 7 above to discuss these.
- a. Point 7a – Since we've not got into the matter of assigning crews, there is no conductor name shown. We'll discuss the matter of assigning crews in a later chapter.
  - b. Point 7b – our train is SLCH on Monday February 16, 1988
  - c. Point 7c – we're currently at St. Louis, MO and our next location is ACT with a final destination of Chicago, IL
  - d. Point 7d – we're not using DCC even though the throttle is shown as "12", (that is the default throttle number). We've also not started to assign locomotives nor end of train cars (caboose/van/cabin) so nothing is shown in those areas.

- e. Point 7e – We have a clearance (16-002) and there are no specific orders that apply to the train.
  - f. Points 7f, 7g, 7h, 7i, 7j, 7k, 7l and 7m – We have no cars on the train leaving staging track STL03s. If we did these would be listed under the heading “CONSIST ON LEAVING THE YARD”. We do have five <sup>(19)</sup> cars to be picked up at ACT (note the “CARS FOR PICKUP” heading), all of them empty, and all of them to go to the CHI02s staging track. None of the cars that are listed are shown as being light or heavy or that need special handling.
  - g. Points 7n – We have this warning since we are slated to do some switching at ACT.
  - h. Point 7o – Since Train SLCH only switches the yard at ACT, the “Movement on other than main tracks...” message is not printed. The “Movement on other than main tracks...” message only appears on trains that switch industries.
  - i. Point 7p – Since we currently have no cars, no locomotives and no caboose, the switchlist shows that the total length of the train is zero. That will change once we get the next switchlist at ACT since we will pick up the three cars at ACT.
  - j. Point 7q – Again since there is nothing in the consist, the train weight is zero. Similarly, this will change on the next switchlist.
  - k. Point 7r – No locomotive(s) therefore the tractive effort field is zero. No cars therefore the required pull is zero.
  - l. Point 7s – No helper regions are defined so there is nothing showing about this.
  - m. Point 7t – We’ll get our next switchlist at ACT **after** we pick up the three cars shown.
9. Before we go any further, we need to print out the switchlists for the remaining two trains. First let’s deal with train CHSL. Double-click on train CHSL (the last train in Figure 9-18). As indicated in point 6 above, the switchlist will print, and the train will be marked as closed. A sample of the switchlist can found in Appendix G as Figure G-3.
10. Train 202 requires one additional step before we print out the switchlist. All trains which leave a local yard need to be reported prior to printing out the switchlist. **Single** click on train 202, then click on the “Report” button at the bottom of the “Current Trains in Line-up...” window (Figure 9-18). A second window like the one shown in Figure 9-19 will appear. Again click on the “Report” button at the bottom of the “Reporting

---

<sup>19</sup> The number of cars you have shown on your own switchlist may differ from what my switchlist shows, and that is OK. Why this occurs is one of life’s mysteries as Jim Moir has explained in Q and A that was included in the introduction to this manual. A different number of cars on any switchlist is a possibility and can be accepted as being OK.

movements" window and a third window will appear (Figure 9-20). Click on the "Yes" button at the bottom of the "Open this train..." window; you will notice that both the "Open this train..." window and the "Reporting movements" window have been closed. If there were cars on train 202, a window like the one shown in Figure 9-21 would appear. In that case, click on the "Setoff & Trim" button in the "Train reporting at same location" window and the "Train reported at" window will close. Finally, click on "Close" in the "Reporting movements" window to close that window as well <sup>(20)</sup>.

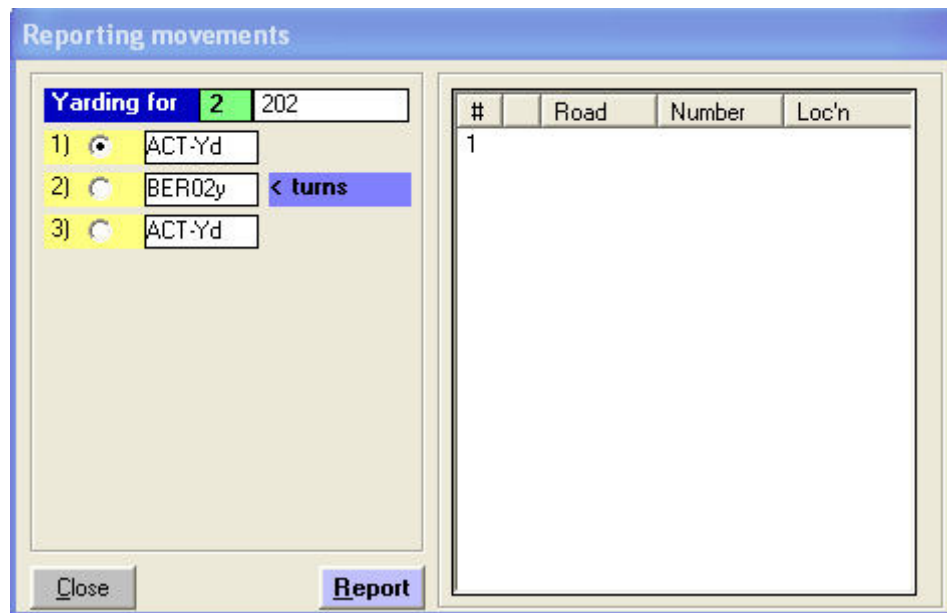


Figure 9-19

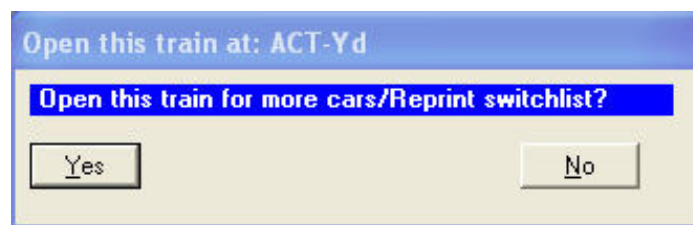
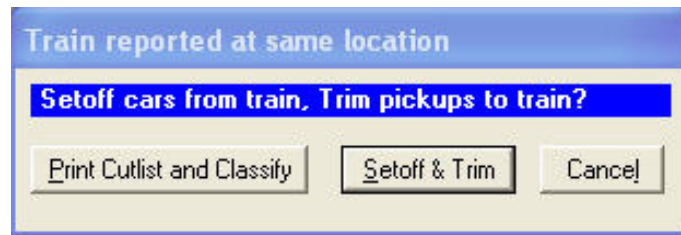


Figure 9-20

<sup>20</sup> A number of the more experienced ProTrak users have indicated that at the start of each session, they report all trains which originate at a yard. This eliminates the problem of trying to remember to do this task as each train is ready to depart – just print out the switchlist and go.





*Figure 9-21*

11. As you can see from Figure 9-22, Train 202 no longer shows a status of "Closed". This has allowed ProTrak to see if there were any additional cars to add to Train 202 or any cars to be setoff in ACT-Yd.

#	Symbol	Op RR	Departs	->	Location	Status	Nxt Yard	Cars	Pick	Xtra
1	SLCH		1:01 AM	-	STL03s	Closed	ACT-Yd		5	
2	202		7:00 AM	E	ACT-Yd		BER02y			
3	CHSL		9:00 AM	-	CHI02s	Closed	ACT-Yd		2	

Switchlist      Report      Close

*Figure 9-22*

12. Finally we're ready to re-print the switchlist for train 202. Double-click on train 202 (the second train in Figure 9-18). Again, the switchlist will print, and the train will be marked as closed. A sample of the switchlist for train 202 can be found in Appendix G as Figure G-2.
13. Once all three of the switchlists have been printed, Figure 9-23 shows what the "Current Trains in Line-up..." window should look like.

[illegible]

*Figure 9-23*

## Train Movements

The next set of reports we'll look at are the ones covering train movements.

1. On the ProTrak Operations Toolbar, click on "Train Movements" and select "Report Train location" from the dropdown list. A window similar to the one shown in Figure 9-24 will appear (the window shown in Figure 9-23 will automatically be closed). Initially, this window appears to be identical to the window in Figure 9-17 however if you compare the two figures (Figure 9-24 and Figure 9-17) you will see some differences.
  - a. The first is that the location of the "Report" button has changed – it is now on the extreme left side rather than towards the middle. This signifies that we are working with Train Reporting, rather than Switchlists.
  - b. In addition, there is a third button - "Mark train closed". Since we haven't selected any train yet, all of the buttons with the exception of the "Close" button are disabled.

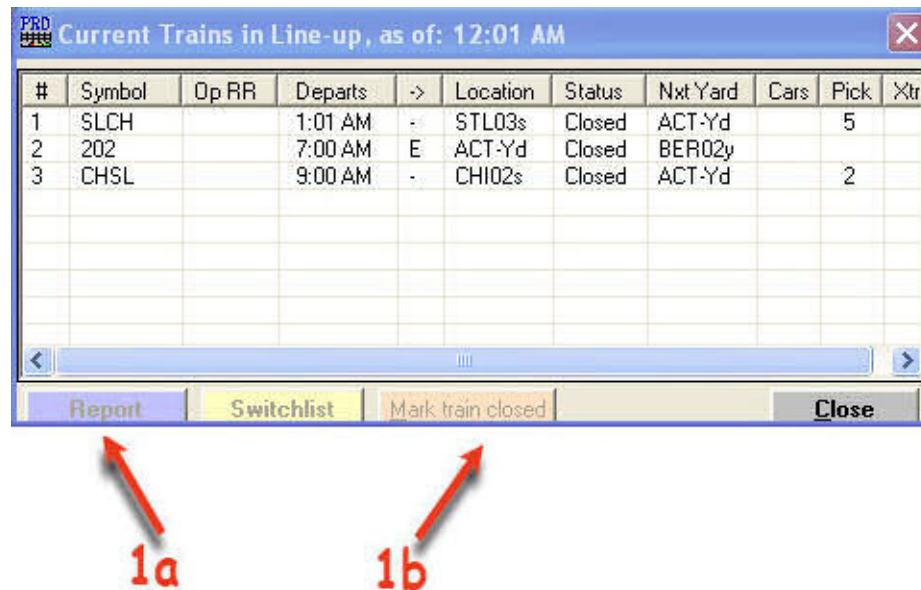


Figure 9-24

- Double-click on the first train (SLCH) and a window similar to the one shown in Figure 9-25 will appear.

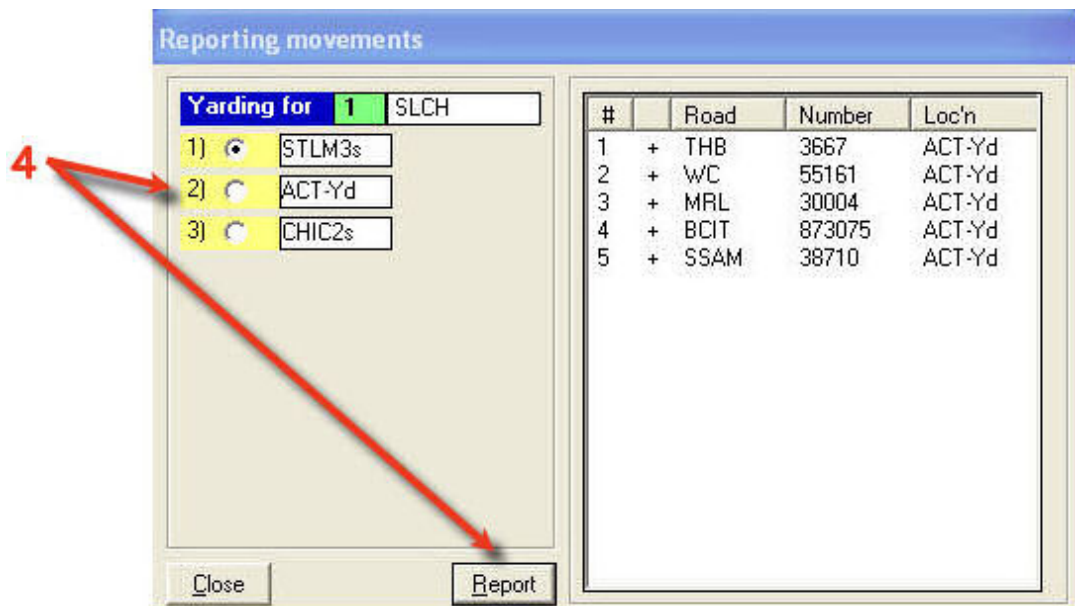


Figure 9-25

- As you can see in the upper portion of the left hand panel there are three radio buttons (below the "Yarding for..." label) – we'll call them the "Location" radio buttons. The "Location" radio button currently selected is for the first location for the train – STL03s in this case.

Another thing to notice is the information in the right hand panel. You can see 5 cars listed that are currently at "ACT-Yd" (Loc'n). Also note that there is a "+" immediately preceding the data in the "Road" column. Since we are currently in the STL03s staging track, the "+" indicates that when we get to ACT-Yd, we will pick up these 5 cars.

4. Click on the second radio button – the one labeled "ACT-Yd", then click on "Report". The train has now moved (at least in the computer) to the new location – ACT-Yd. The window shown in Figure 9-26 will now appear asking what you want to do.



Figure 9-26

5. We'll click on the "Print Cutlist and Classify" button. Three things will happen:
  - a. The "Cutlist" for the cars will be printed on the printer assigned to ACT-Yd. A copy of this "Cutlist" is shown in Appendix G as Figure G-4. (There are no cars listed in the "Cutlist" since we have no set outs, just pickups) <sup>(21)</sup>.
  - b. The "Current Trains in Line-up..." window (Figure 9-24) has been updated
    - i. The "Location" data field now shows "ACT-Yd".
    - ii. The "Nxt Yard" data field now shows "CHI02s"
    - iii. The "Cars" column now shows 5 while the "Pick" column is blank. The cars are now in the train (at least in the computer).

Figure 9-27 shows the updated "Current Trains in line-up..." window. As you can see Train SLCH is no longer marked "Closed". This means additional cars may be assigned (see para 6c below Figure 9-18).

<sup>21</sup> For future reference, you may see the phrase "Push to: 1 for: 59" as well as the phrase "Classify for: 1 for: 59". For our purposes, both should be taken as meaning the same thing.

[illegible]

*Figure 9-27*

- c. The third thing to happen is that the “Reporting movements” window has also been updated and has closed automatically.
- d. The updated “Reporting movements” window is shown in Figure 9-28. To view the updated window, follow the instructions in step 2 above.

**Reporting movements**

**Yarding for** **1** SLCH

1) STLM3s

2) ☒ ACT-Yd

3) ☐ CHIC2s

#	Road	Number	Loc'n
1	THB	3667	SLCH
2	WC	55161	SLCH
3	MRL	30004	SLCH
4	BCIT	873075	SLCH
5	SSAM	38710	SLCH

Close Switchlist Report

*Figure 9-28*

- e. Compare Figure 9-25 to Figure 9-28 :
  - i. The "Location" radio button now has "ACT-Yd" selected.
  - ii. Each car shown in Figure 9-25 had a "+" in front of the car's reporting marks signifying that they were to be picked up.

In Figure 9-28, the "+" marks are gone since those cars are now in the train.

- iii. The "Loc'n" column in the right-hand panel now shows "SLCH" (the train symbol) rather than "ACT-Yd" also indicating that the cars are now in the train.
  - f. Once you have finished viewing the updated "Reporting Movements" window (Figure 9-28), click on "Close".
6. Once you have printed the cutlist for this train, if you were operating on a real layout vs. doing paper sessions, you would switch the cars as directed. Since there were no cars on this train, there is no work to do. Switching the cars is referred to as "Classifying". ProTrak assumes that since you selected "Print Cutlist and Classify" that you have switched the cars as directed in the cutlist before continuing to the next location.
7. For your information the "Classify" button will do all of the actions noted in steps 5 and 6 above with the exception of printing the cutlist. The "Hold" button is used when a train arrives at a yard and the yardmaster cannot handle the train at that time due to other work. Clicking on the "Hold" button will place the cars at the yard, but will indicate to ProTrak that the train has not yet been classified by the yardmaster. Once the yardmaster has time to accept the held train, he calls for the cutlist and can work the train (classify it).
8. Once you have switched your train and are ready to depart there are a couple of things that need to be done. The first of these is to make sure ProTrak has the information it needs to route the cars in your train properly. To do this, on the ProTrak Operations Toolbar, click on "Yardmaster" then select "Route cars at Yards & Customers" from the dropdown list. You will briefly see a progress bar and then you will be returned to the "Current Trains in Line-up..." window <sup>(22)</sup>.
9. The second thing that may need to be done is to pickup a new switchlist. Whether this needs to be done or not will depend on where you are and whether your current switchlist directs you to get a new switchlist at this location. Since the current switchlist for train SLCH indicates that a new switchlist need to be picked up at ACT, we will do just that. If you've forgotten how to do that, you could refer back to the section earlier in this chapter entitled "Switchlists" however we'll use an alternative means to look at the switchlist.

---

<sup>22</sup> It is important that you get into the habit of updating the routing every time you report a train, except when the train reaches its final destination. Do the update after you have reported the train, but before the train leaves.

10. If you remember during our discussion of switchlists, we talked about the fact that several fields had a zero in them because, at that point, there were no cars in the train. Let's go back and look at the switchlist for train "SLCH".
11. On the ProTrak Operations Toolbar, click on "Switchlist" then select "Preview a Switchlist" <sup>(23)</sup> from the dropdown list. This will open a window like the one shown in Figure 9-29 <sup>(24)</sup>.

[illegible]

*Figure 9-29*

- a. Double-click on the first train in the list (SLCH) and a window like the one in Figure 9-30 will appear. This is a screen version of the printed switchlist, so nothing will print on your printer.

<sup>23</sup> Previewing a switchlist is the almost the equivalent of printing a switchlist. By previewing the switchlist, we have satisfied the requirement to pick up a new switchlist at a specific point without actually printing any paper report. In order to save paper, we will be using the preview feature often in the future. The one thing that does not happen when previewing a switchlist is marking the train's status as closed. To change a train's status to "Closed" you must click on the "Re-block train" checkbox. Note that even though we have previewed the switchlist, we can still print it by clicking on the "Print" button in the bottom right corner of the "Switchlist Preview" window.

<sup>24</sup> Notice that this window looks familiar. The key to determining that this is the switchlist preview version of the “Current Train in Line-up...” window is that only one button appears at the bottom of the window – “Switchlist”



**Switchlist Preview**

Train: **SLCH, Monday, February 16, 1988** at: **ACT**

Call Time: **12:01 AM** Throttle: **12** Next Yard: **Chicago, IL**

Clearance #: **16-006** Origin: **St Louis, MO**

Conductor: **na** Destination: **Chicago, IL**

Engine: \_\_\_\_\_ Cabin: \_\_\_\_\_

#	Car	Number	E	LG	KND	B#	Consignee	SPOT	NxtLoc	Tons	Contents
1	THB	3667	E	44	XM	S02	AgentBN	-->	CHI02s	28	mty
2	WC	55161	E	57	GB	S02	AgentBN	-->	CHI02s	28	mty
3	MRL	30004	E	55	XM	S02	AgentBN	-->	CHI02s	28	mty
4	BCIT	873075	E	80	FBC	S02	AgentBN	-->	CHI02s	28	mty
5	SSAM	38710	E	80	FBC	S02	AgentBN	-->	CHI02s	28	mty

**CARS** Loads: **0** Total Cars: **5** Empties: **5** Pickups: **0**

**TRAIN** Total train weight: **141** tons Total train length: **316** feet

**DYNAMICS** Units rated tractive effort (TE): **0** lbs Maximum required drawbar pull: **15,987** lbs

Buttons: Update conductor, power or caboose assignments, Change Power Consist, Add car, Re-block train, Flip block in train, Flip train consist, Work Notes, Print, Close

Figure 9-30

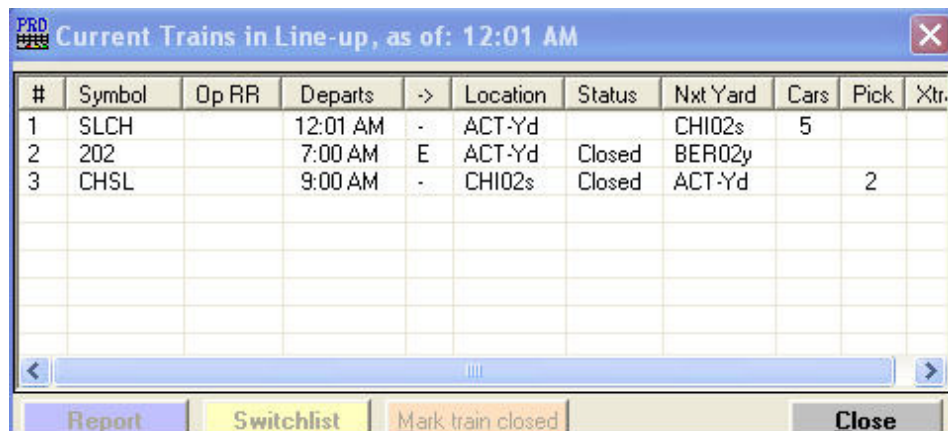
- b. Look down near the bottom of the screen where the label "CARS" appears. As you can see we now have the following:
- Loads – 0
  - Empties – 5
  - Total cars – 5
  - Pickups – 0 (We've already picked up the cars and there are no cars to be picked up at the next location).
  - Total weight – 141 tons
  - Total length – 316 feet.

If we look at the "length" column (headed "LG") in Figure 9-30 and add up the length of all of the cars listed on this switchlist, the total you calculate should match the one in the "CARS" area of Figure 9-30. The weight of the cars is 28 tons each (the column headed "Tons") so 5 cars times 28 tons = 141 tons<sup>(25)</sup>.

<sup>25</sup> If you see an apparent discrepancy between your calculations and the figure shown in the "Total weight" data field it is likely due to rounding. Let's say we had three cars in the train rather



- c. Below the "CARS" area is an area labeled "DYNAMICS". In the right portion there is an area labeled "Maximum required drawbar pull" This area now shows "15,987 lbs"
  - d. Click on "Close" <sup>(26)</sup> to close the "Switchlist Preview" window.
12. When we started out to see what changes had taken place in the switchlist, both the "Current Trains..." window and the "Reporting movements" window were open on our screen. Opening the "Switchlist Preview" window automatically closed both the "Current Trains..." and "Reporting movements" windows then re-opened the "Current Trains..." window in the switchlist preview mode.
13. We need to move each of the remaining two trains – 202 and CHSL to the next station. As a result of what was described in step 11 above, the "Current Trains..." window is now no longer open in the correct mode. On the ProTrak Operations Toolbar click on "Train Movements" then select "Report Train location" from the dropdown list. When the "Current Trains..." window opens (Figure 9-31), double-click on train 202 and the "Reporting movements" window will open (see Figure 9-32).



#	Symbol	Op RR	Departs	->	Location	Status	Nxt Yard	Cars	Pick	Xtr.
1	SLCH		12:01 AM	-	ACT-Yd		CHI02s	5		
2	202		7:00 AM	E	ACT-Yd	Closed	BER02y			
3	CHSL		9:00 AM	-	CHI02s	Closed	ACT-Yd		2	

Figure 9-31

than five. These cars may actually have a weight of, say, 28.25 tons each. When you multiply 28.25 by 3 you come up with 84.75. If you then round it off to whole numbers only, you will come up with 85 tons which would be displayed. Multiplying the 28 tons per car by 3 gives you 84 tons which is the number you would expect to see.

<sup>26</sup> As you can see from looking at the right hand side of Figure 9-30, there are a number of other actions that we could do including printing the updated switchlist. Some of these are advanced options and won't be covered in this manual. Others will be covered in later chapters.

#	Road	Number	Loc'n
1			

Figure 9-32

14. As you can see in Figure 9-32, there are only two options – “Report” and “Close”. Click on the second radio button – the one labeled “BER02y” then click on “Report” and both the “Reporting movements” window and the “Current Trains...” windows are updated. The updated windows are shown in Figures 9-33 and 9-34 respectively.

#	Road	Number	Loc'n
1			

Figure 9-33

[illegible]

*Figure 9-34*

15. As with train SLCH the "Reporting movements" window has been updated to show the "BER02y" radio button as selected and has been closed and the "Current Trains..." window has been updated to show the new location of train 202 as BER02y.
16. As you can see, once we reported train 202, a new button appeared at the bottom of the right hand panel of the "Reporting movements" window. This button is marked "Switchlist" and allows us to preview the switchlist for train 202 at this point in its travel. Go ahead and click on it if you want. It is similar to the one that we viewed in Figure 9-30. If you viewed the switchlist, click on "Close" to close the "Switchlist Preview" window.
17. Repeat the procedures described in steps 11 thru 14 for the remaining train – CHSL (use the ACT-Yd radio button). When the "Cars in train just arrived" window opens (see Figure 9-26), click on "Print Cutlist and Classify. Once you have completed steps 11 thru 14 for CHSL, the "Current Trains in Line-up..." window should look like the one shown in Figure 9-35. I've not put a copy of the "Cutlist" for CHSL in Appendix G since, with the exception of the train symbol (CHSL vs SLCH), it is identical to Figure G-4.

[illegible]

*Figure 9-35*

18. Repeat steps 11 thru 14 once more for each of the three trains to move them to their final locations.
19. As you move the two thru trains to their final location, you will be asked to confirm the staging track that the train has entered. In the case of SLCH (the first train in Figure 9-35) the window shown in Figure 9-36 will appear. Unless, (or some unknown reason) you decided to change the staging track that the train has been sent to, all that is necessary is to click on "Close" <sup>(27)</sup>. You will notice the comment with the blue background near the top right of the window which reads "Click slot to remove train". If the window shows more than one reference to the train you are putting away, you may remove any incorrect references by clicking on the slot. If, for instance, there was a reference to train "SLCH" in the 2<sup>nd</sup> slot in track 1 in addition to the one in track 2 you could click on the 2<sup>nd</sup> slot in track 1 to keep things accurate.
20. You may have wondered about what has happened with train 202. I'm sure you noticed that there was no cut-list available when the train reached the reporting point at BER-02y. The answer is quite simple – BER-02y is not a yard; on the other hand, train 202 did produce a cut-list when it reached ACT-Yd since that is a true yard.

<sup>27</sup> This window was developed primarily to assist crews operating on a large layout where there are, say, 12 staging tracks. Locating 'your train' on a layout of that size had become difficult and this assisted in keeping track of where trains in staging were.



Figure 9-36

21. Once you click on "Close" you will notice the "Current Trains in Line-up..." window has been updated and train "SLCH" is no longer shown (See Figure 9-37). This makes sense since train "SLCH" has completed the trip. You will need to do the same thing with train "CHSL"

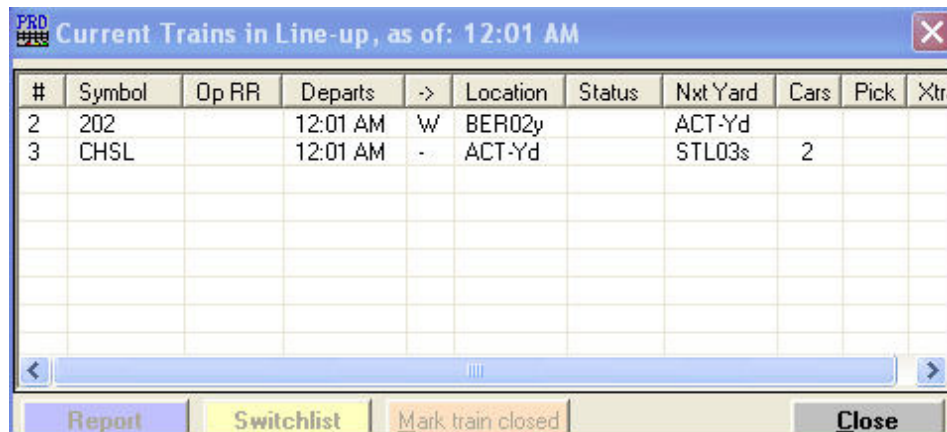


Figure 9-37

22. Once all three trains have been finished their journey, the "Current Trains in Line-up..." window should have no entries in it as all trains have completed their trips.

23. Click on "Close" to close the "Current Trains in Line-up..." window.

24. On the ProTrak Operations Toolbar click on "Operations" then choose "Exit operations" from the dropdown list. A window will be displayed asking "Request to stop Operations. Are you sure?" - click on "Yes". As previously noted, you may see some windows briefly flash as ProTrak updates various files.

## Update the railroad for the next session <sup>(28)</sup>

We've completed the "Operations" portion of the session and now we need to do some 'housekeeping' to get ready for the next session. This 'housekeeping' is where cars are 'unloaded' and assigned new loads. This is also where trains in staging are prepared for the next session <sup>(29)</sup> <sup>(30)</sup>.

Before we continue, you need to make sure that the printer which has been defined as the default printer in Windows <sup>(31)</sup> is ready to print. All reports printed from the "Daily Summary" process will print to that printer.

1. Since we've exited from "Operations", ProTrak now displays the ProTrak Standard Toolbar. From this toolbar, click on "Transportation" then select ""The Daily Summary", Update the railroad" from the

---

<sup>28</sup> Note that if after exiting "Operations" you did **not** run ""The Daily Summary", update the railroad" but simply closed ProTrak and you are now restarting the program you will see a window titled "Go to Reset Railroad Window ?" which contains the following text:

"It appears that you are setting up your railroad, but you are part way through an Operating Session. To enter new data, you must reset trains to origin or complete the operating session. Do you want to reset the railroad?"

This text is followed by "Yes" and "No" buttons. If you click on the "Yes" button the trains and cars are reset to the locations where they were at the start of the operating session. If you click on the "No" button nothing happens and you are back in the main ProTrak window where you can update the railroad for the next session.

<sup>29</sup> As noted in The Recipe Book, you can do an update when a session is partially complete. There are a number of reasons why we might want to do that; here's two of them. First is you have some visitors and run a few trains for them. Before you run a "formal" operating session with all the trains on the line-up, you need to reset the trains. The second reason is that after running a session and updating the railroad for the next session you see you have more empties than you would like. You immediately add more waybills and car-orders. In order to get these cars in play as loaded you need to rerun the Daily Summary using the "Only unload delivered cars and reload available cars" option

<sup>30</sup> Also as noted in The Recipe Book, if you have a railroad where staging tracks are shared with other staging tracks at the 'other' end of the railroad, the trains may be "re-used" and the session may not 'complete'. This more closely models the continuing action of prototype railroads. Since the shared staging track concept is a fairly advanced topic, it is best if you consult with others on the Yahoo ProTrak Users group for more information and assistance if you are contemplating using this feature.

<sup>31</sup> If you are using something other than Windows as your operating system (Mac or Linux for example), you need to follow whatever procedures you would use set a printer as the default printer for your system.



dropdown list. At this point a window similar to the one shown in Figure 9-38 will appear.

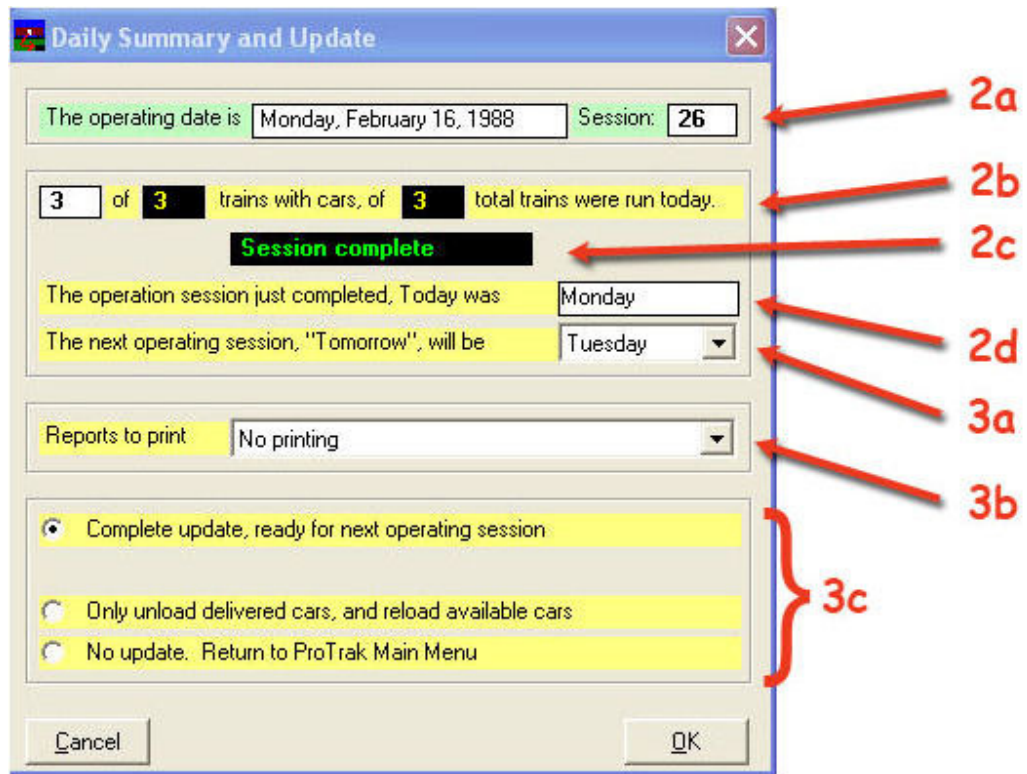


Figure 9-38

2. If we look at the “Daily Summary and Update” window we can see a number of things:
  - a. The first line shows us the details of the session that has just completed: Date is Monday, February 16, 1988 and the session number was 26.
  - b. The next line indicates that all 3 trains ran today
  - c. The third line, (green text on a black background centered under the trains line) shows “Session complete”.
  - d. The fourth line tells us that today was run as Monday (regardless of what the real day of the week would have been on Feb 16, 1988).
3. At this point there are a number of things that we can do.
  - a. The first option is what day of the week do we want the next session to run as? The default, naturally, is Tuesday. It is Jim Moir’s recommendation that, at least initially, we keep all sessions running as Monday. To make that happen, click on the dropdown arrow beside the “The next operating session...” data field and select Monday from the list.

- b. The second item to select is what reports to print. You have the following options:
  - i. No printing
  - ii. Print the 'General Manager's Daily Summary'
  - iii. In addition to printing the 'General Manager's Daily Summary', also print a report of unfilled car-orders and non-loaded cars.
  - iv. In addition to printing the two reports in sub para iii you can also print a report of final car status.
  - v. Finally, in addition to printing all the reports detailed in sub para iv you can print the report of initial car status.

For your viewing pleasure, a copy of each of these reports is included in Appendix G as Figures G-5 to G-10 <sup>(32)</sup>. We'll chose to print the "Daily Summary" only as normally, that is the only report that is needed.

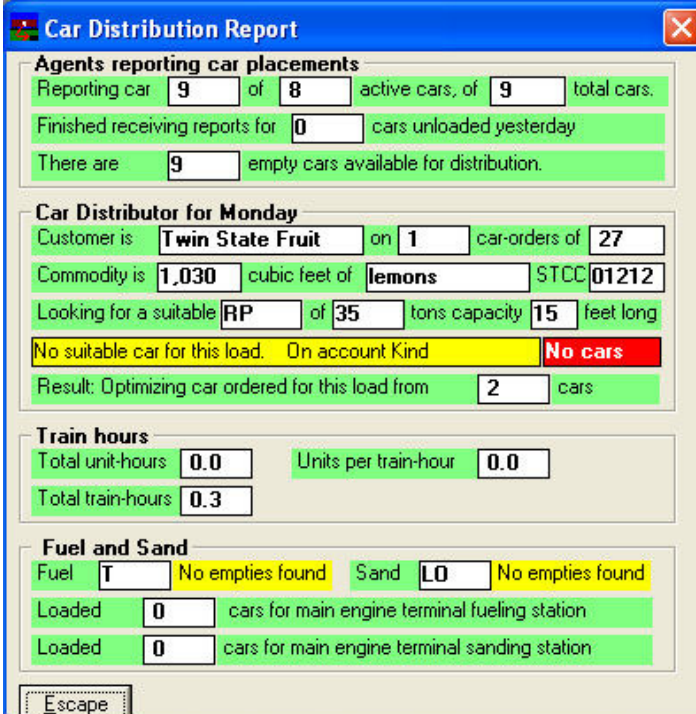
- c. The last selection to be made is one of the three radio buttons in the lower portion of Figure 9-38. The normal (and therefore the default) selection is to do a "Complete update, ready for next operating session". In our case that is what we'll do, so we need to do nothing to the radio buttons. Let's talk for a moment about the other two buttons. The last button – "No update. Return to ProTrak Main Menu" is self explanatory. The middle button, ("Only update delivered cars...") however, allows us to update some of the cars – those that have been delivered as requested in waybills, and then reloading any available cars. We'll look at what happens if you chose the "Only update delivered cars..." option in the section titled "Only unload delivered cars option" later in this chapter.
4. In our case we will choose to a "Complete update". Once the selections have been completed, click on "OK". At this point the "Car Distribution Report" window similar to the one shown in Figure 9-39 will appear and ProTrak will update various records, displaying their progress as the occurs <sup>(33)</sup>. Note that Figure 9-39 was captured late in the update progress and many of the fields and labels in the window change as the update progresses. Once the update has completed, the window closes automatically.

---

<sup>32</sup> Note that the detail entries on your reports may differ from those shown depending on the build of ProTrak in use.

<sup>33</sup> During this process, ProTrak re-orders the car-orders in order to maximize car loadings. The program does not just go down the list of customers and do each car-order for that customer, but rather sorts the car-orders by a number of customer specific characteristics and load, then loads the cars in the sorted order. This maximizes the number of cars loaded. On selecting a car, the Program finds all suitable cars on the railroad regardless of their location, applies the car service rules that apply and selects the "best" car for that order.





**Car Distribution Report**

**Agents reporting car placements**

Reporting car  of  active cars, of  total cars.

Finished receiving reports for  cars unloaded yesterday

There are  empty cars available for distribution.

**Car Distributor for Monday**

Customer is  on  car-orders of

Commodity is  cubic feet of  STCC

Looking for a suitable  of  tons capacity  feet long

No suitable car for this load. On account Kind

Result: Optimizing car ordered for this load from  cars

**Train hours**

Total unit-hours  Units per train-hour

Total train-hours

**Fuel and Sand**

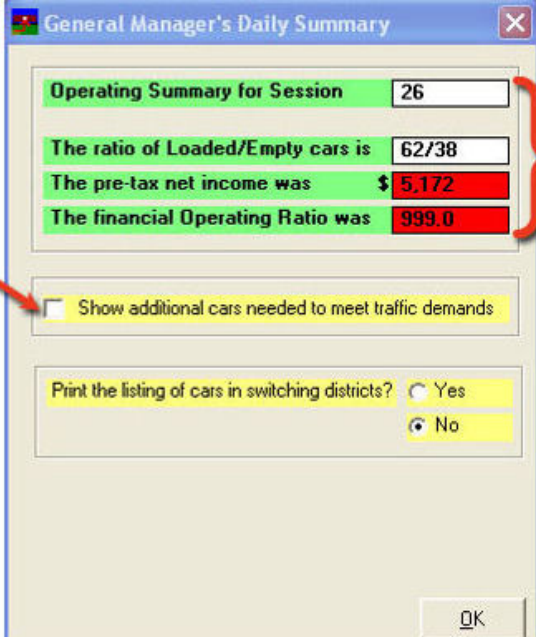
Fuel  No empties found Sand  No empties found

Loaded  cars for main engine terminal fueling station

Loaded  cars for main engine terminal sanding station

Figure 9-39

5. The next window to appear is the "General Manager's Daily Summary" as shown in Figure 9-40.



**General Manager's Daily Summary**

Operating Summary for Session

The ratio of Loaded/Empty cars is

The pre-tax net income was \$

The financial Operating Ratio was

☐ Show additional cars needed to meet traffic demands

Print the listing of cars in switching districts? ☐ Yes ☒ No

*Annotations: A red bracket labeled '6' groups the four summary statistics. A red arrow labeled '7' points to the checkbox for 'Show additional cars needed to meet traffic demands'.*

Figure 9-40

6. The first data field identifies the operating session number that we are completing – 26 in this case. The 2<sup>nd</sup> data field shows the ratio of loaded/empty cars – 62/38 in this case. The Recipe Book states that a good loaded empty ratio is 60/40 so we're fairly close to that ratio. The next two figures are part of the 'financials' and for now we'll ignore them <sup>(34)</sup>.
7. The next area in Figure 9-40 is labeled "Show additional cars needed to meet traffic demands". Since we're just setting things up and are not sure whether we've got enough cars or not, we'll click on that check box to see how we are doing car wise <sup>(35)</sup>. As soon as we do, a window similar to Figure 9-41 will appear.

Figure 9-41

8. As can be seen, ProTrak believes we need more of a number of cars to meet the needs of all of the waybills we have in the system. While

<sup>34</sup> If you want to understand the 'financials' there is information in The Recipe Book at the various locations where 'financials' are displayed.

<sup>35</sup> One of the things that makes ProTrak seem complex is that the program is about "traffic" (or commodities) movement just as is the case with prototype railroads. We've set up traffic (using way bills and car-orders) and let ProTrak select the cars. This process is the complete opposite of "car cards" which is concerned with moving cars not traffic. With car cards the user first selects a car (and perhaps a load) and moves the car sometimes (often?) with no reference to the traffic. Traffic movement requires us to relinquish control of car movements and instead control the traffic. The benefit comes in the 8<sup>th</sup> (or 15<sup>th</sup> or 100<sup>th</sup>) sessions. Instead of saying "Here comes the GVSR gondola – it goes to ABC Industries", we say "Here comes the GVSR gondola. I need to look at the list to see where it is going," since the car could be carrying any number of commodities, destined of any number of different industries.

we're looking at Figure 9-41 take note that ProTrak feels we need 2 additional gondolas (GB) <sup>(36)</sup>. We'll use that information later.

9. The last data field in the window allows us to print out a "Request for Quotes" report for the cars shown in Figure 9-41. Again, since we're learning what to do, we'll ask for this report by clicking on the "Yes" radio button.
10. Click on "OK" to have the report printed and return to the "General Manager's Daily Summary" window. A copy of the "Request for Quotes" report is included in Appendix G as Figure G-11.
11. The last area on the General Manager's Daily Summary window is labeled "Print the list of cars in switching districts" (See Figure 9-42). It is also useful to us at this point in our learning process so we'll click on the "Yes" radio button. Once we complete step 12 below, the report will print, but only if there were cars delivered to customers. A sample of this report is in Appendix G as Figure G-12. Since there were no cars at any of the SPOTs on the railroad, no report printed from Session 26. The sample in Figure G-12 is taken from session 28 where there will be two cars at an on-line customer.

---

<sup>36</sup> You may see different numbers – again, one of life's mysteries!

General Manager's Daily Summary

Operating Summary for Session	26
The ratio of Loaded/Empty cars is	62/38
The pre-tax net income was	\$ 5,172
The financial Operating Ratio was	999.0

☐ Show additional cars needed to meet traffic demands

Print the listing of cars in switching districts? ☒ Yes ☐ No

OK

Figure 9-42

12. To finalize the update, click on the button in the bottom right corner of the window. Depending on whether you clicked on the "Yes" or "No" radio button, the button at the bottom of the window will read "Print and Close" (for Yes) or just "Close" (for No). In Figure 9-42, the "Yes" radio button has been selected so the button at the bottom of the window displays "Print and Close" as the label.
13. You will see the "Operations Pre-Processor" window similar to the one shown in Figure 9-7. This window will close automatically and the "Financial Summary" window as shown in Figure 9-43 will appear.

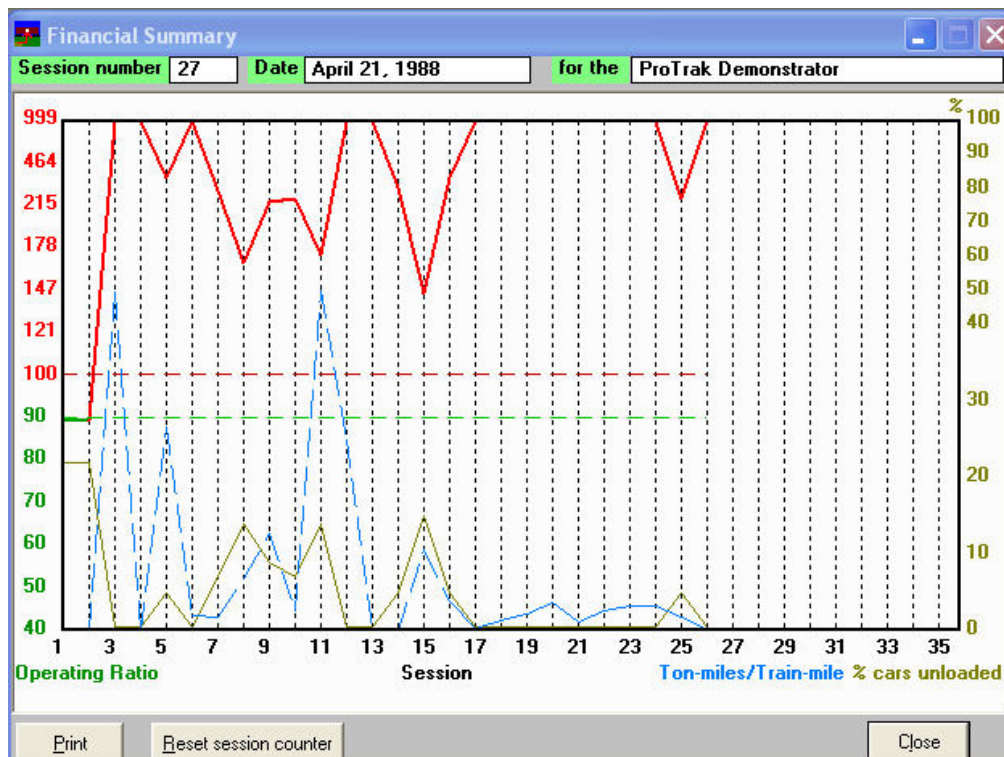


Figure 9-43

14. For the most part, this deals with 'financials' and we'll ignore it. There are two items to note:
- First is the "Session number" shown at the top left of the window. This shows "27" which is the **next** session number, not the current one.
  - Second is the button at the bottom of Figure 9-43 marked "Reset session counter". As should be obvious, this allows us to reset the session counter from 27 to 1 (or whatever number we choose). We will **not** be resetting the session counter<sup>(37)</sup> at this time, however. To keep the screen cleared up, click on "Close" to close the "Financial Summary" window.

The next eight steps explain what happens if you chose option 2 – "Only unload delivered cars..." in Step 3c. We will not be doing this, but for reference purposes, these eight steps show you what needs to be done and the results of those actions. If you don't wish to review the "Only unload delivered cars option" section, skip to "Update the railroad for the next session – continued" below.

<sup>37</sup> While on the subject of resetting the session counter, it is important to note that resetting the session counter does that only. It does not relocate cars to the default yard.

## Only unload delivered cars option

1. Assume that we've chosen, in Step 3c in the "Update the railroad for the next session" section above. This meant that we want to only unload delivered cars and reload available cars. This also means that the session has not ended. This option is useful if there is a situation where waybills cannot be filled due to lack of cars, but part way through an operating session, cars become available as they are now unloaded or would become available if they were unloaded. Normally the loading/unloading only takes place at the end of a session.
2. To make the unloading/loading happen. Choose the 2<sup>nd</sup> radio button ("Only unload delivered cars...") in Figure 9-38 and click on OK. Once you click on the 2<sup>nd</sup> radio button, you will notice that you cannot change the "The next operating session..." day. This makes sense as the session has not completed.
3. Rather than the normal end of session process that we saw in the previous steps, you will see a window like Figure 9-44 appear.

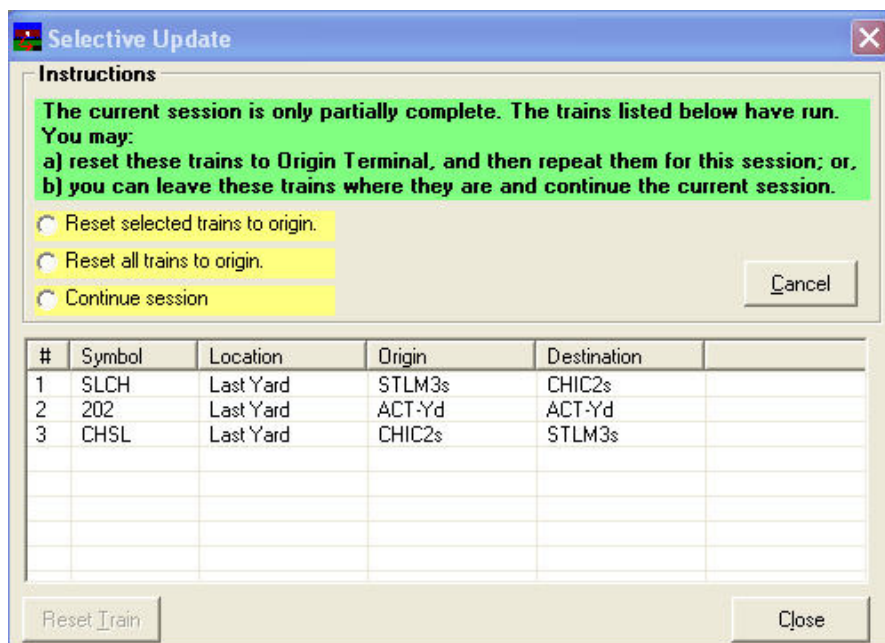


Figure 9-44

4. As you can see, in the upper portion of the window there are three radio buttons. If you choose the last button ("Continue session") you will receive an error message like the one shown in Figure 9-45. If you click on the "Yes" button any delivered cars are unloaded and any cars that can be loaded are loaded. The balance of the normal end of session reports are printed (General Manager's Daily Summary and, if

chosen, the report shown in Figure G-11 of Appendix G). Note that the financial graph (Figure 9-43) does not appear.

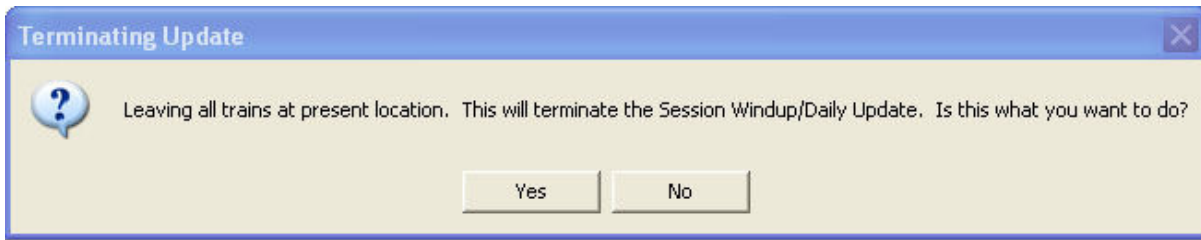


Figure 9-45

5. If you click on "No", you are returned to the selection process in step 3.
6. If you chose the second button ("Reset all trains...") you will see a window that looks like Figure 9-46. This shows the results of the reset operation. Note that there are no buttons on this window so click on the red "X" in the upper right corner of the window,

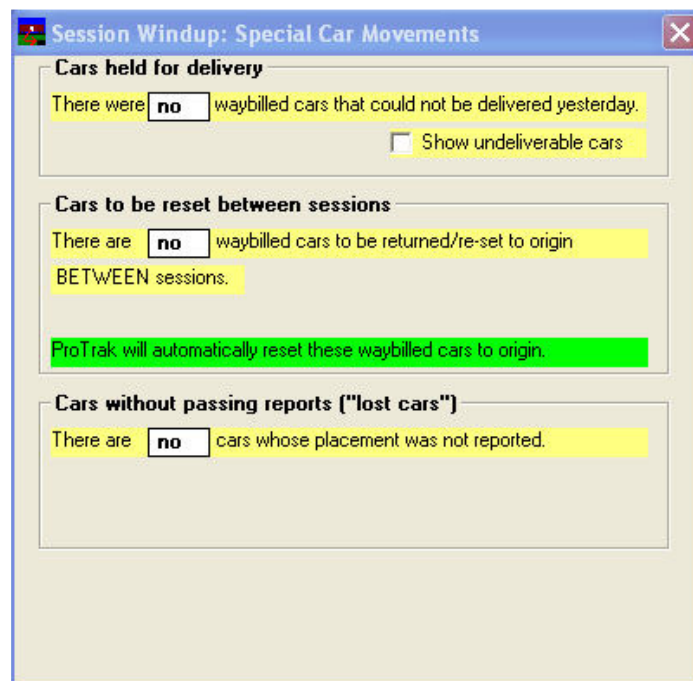


Figure 9-46

7. If you chose the first option ("Reset selected trains to origin"), a window like Figure 9-47 will appear. This is the window in Figure 9-44 but without the radio buttons.



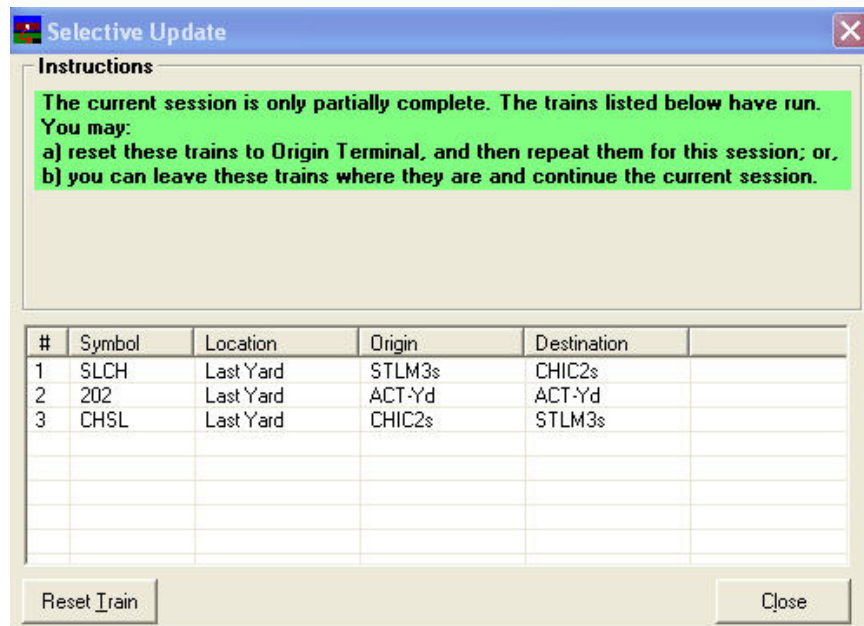


Figure 9-47

8. Click on one of the trains (train "202" for example) and the "Reset Train" button in the lower left of the window is enabled. Clicking on this button will reset the train. Once you've clicked on the "Reset Train" button, the train is removed from the list. You may, if you wish reset other trains by clicking on the train symbol and then on the "Reset Train" button. Once you've finished resetting the train (or trains) click on the "Close" button. Again, a figure like the one in Figure 9-46 will appear.

### Update the railroad for the next session – continued

15. There is one last task that we'll do before we look at the results – that is to print out a list of all of the active cars on the railroad. On the ProTrak Standard Toolbar, click on "File" then from the dropdown list select "Print listings of railroad data". A window like Figure 9-48 will appear.



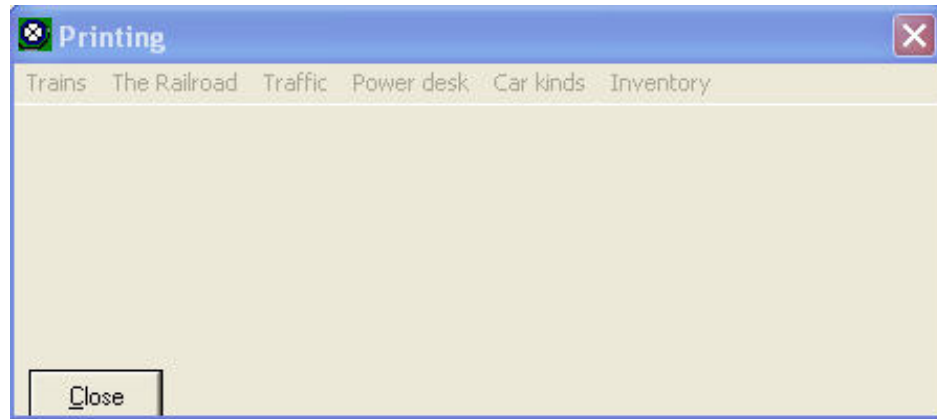


Figure 9-48

16. On the toolbar in the Figure 9-48 window, click on "Traffic" then select "Freight and MOW cars" from the dropdown list that appears. A new window like the one shown in Figure 9-49 will appear.

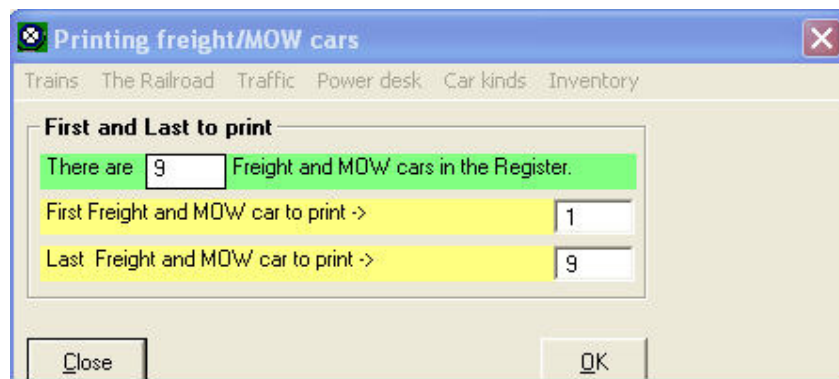


Figure 9-49

17. The "Printing freight/MOW cars" window allows you to select what cars to print. You may choose to start with other than the first car, or end with other than the last car. If you wish to do so, change the appropriate data field. Click on "OK" and another window like the one in Figure 9-50 will appear (on top of the "Printing" window).

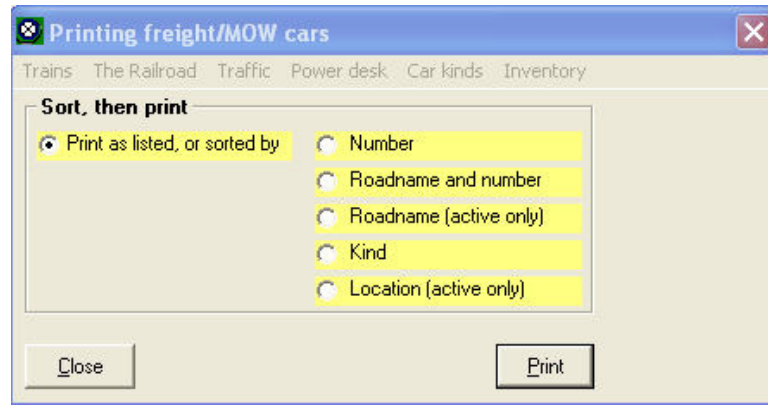


Figure 9-50

18. This window gives you the option of how you want the cars listed. In order to check that all the cars are in the correct location, it is probably best to click on the "Location" radio button <sup>(38)</sup> then click on the "Print" button. A listing similar to Figure G-13 in Appendix G will be printed. You can now use this listing to double check that all of the cars are exactly where ProTrak wants them. Finally click on the "Close" button to close the "Printing" window.

<sup>38</sup> Note that if you choose no option (select none of the radio buttons) the list will be produced in the order of the cars in the ProTrak master cars file. Note also that the "Number" radio button will print the list in order of the number portion of the reporting marks recorded for the car excluding the railroad initials – ex. if the car has the reporting marks of "UP 170509" ProTrak will only use the "170509" when sorting.

## Session Results – What Happened?

We've now completed one operating session; however we need to look at what happened during the session.

1. The first thing we notice is that Train SLCH started out from East Staging with no cars, picked up 5 cars in Actonvale, then returned to East Staging. Why did this happen? If you remember the section in Chapter 3 where Gateways were discussed as well as the entries we made in the section of this Chapter labeled "Adding Car Routing", cars which do not belong to the "ProTrak Demonstrator" railroad are routed back to their home railroad. An examination of the 5 cars that Train SLCH picked up in Actonvale will reveal that:
  - a. All cars are empty
  - b. None have the "PRO" reporting mark and thus belong to another railroad.

Train SLCH is delivering them to the connecting railroad in staging track "CHI02s" for onward movement to their home railroad.

Another question then arises – why didn't Train SLCH take all eight cars (remember car nine has been de-activated)? The answer is that the routing for the cars not picked up takes them through a different staging track. As you can see from looking at the switchlist for Train CHSL (Figure G-3 in Appendix G), two more cars are going 'home' and if we were to go back and look at the routing for the one remaining car we would see that it is to be routed through one of the other two staging tracks (we aren't going to get into how to check the routing at this time, just accept as fact that the routing for the one remaining car is through one of the other staging tracks).

2. The second thing to note is that Train 202 did not deliver any cars to Wilson's as requested. This seems strange as there were two type GB cars in the yard at Actonvale, weren't there? If we look at the switchlists for Train SLCH and Train CHSL we can see that each of these contains a GB car to be returned to the appropriate home railroad. This means that we have no GB cars to deliver to Wilson's.

How do we fix that problem? One solution is obviously to add a car belonging to the "ProTrak Demonstrator" railroad. This car will never be routed off the railroad to go 'home' <sup>(39)</sup> as 'home' for this car will be the yard at Actonvale.

---

<sup>39</sup> The car obviously could be routed to staging tracks when loaded, but when empty will be returned to Actonvale yard.

A second solution might be to run another session and see if one of the cars that was routed to its home railroad can now be returned to be used by Wilson's to ship some scrap metal. In the next chapter we'll try that solution. In fact, if we look at Figure G-6 (ORDERING CARS: ON-LINE CUSTOMERS) we can see that two GB type cars have been ordered.

## **Summary**

In Chapter 9 you have done the following:

- Set up 'zone printing'.
- Entered routing for cars.
- Run one complete operation session.
- Reviewed the result of the operating session.

You have learned about the following:

- How to set up printers so that switchlists will print at other than the default printer.
- How to add routing for cars where routing does not exist.
- How to start an operating session.
- How to stop an operating session.
- What changes occur to the main ProTrak toolbar when an operating session is started.
- How to run an "end of session" process to prepare for the next session.
- How to run an "Only unload delivered cars, and reload available cars" process.
- How to get a list of where cars should be on the railroad.

We've now run one session and we'll continue by running a few more sessions, examining the results and making adjustments where necessary to get things running smoothly. On to Chapter 10