

Car Orders without the Numbers or Operation without Aggravation

Earl T. Hackett, Jr.

Introduction and Credits

This is an operating system introduced to me at a Regional Meet in Grand Rapids by Dan Hinel and Hank TenWolde. They developed it out of the great frustration experienced in using the conventional Car Card system on very large layouts.

Where the Car Card system has a card for each car, the Car Order system has a card for each customer delivery spot. The Car Order system has no documentation for any rolling stock.

The Objective

Get cars moving about the layout

- In a meaningful, prototypical way
- Eliminate paperwork
- Eliminate worrying about reporting marks
 - No lost cards
 - No lost cars
 - No more eye strain

Advantages over the Car Card System

- No lost cards
- No lost cars
- No more eye strain – night operations anyone?
- Anyone can add or remove a car from the layout at any time without concern for the operating system, a major plus for
 - Clubs
 - Modular layouts with many members
 - Private layouts with operating crew with their own equipment.

How does it work?

Car movement is generated by an order from an industry to deliver or pick up a car.

At the yard there is a stack of car orders requesting a particular type of car be delivered to a specific spot. There is (usually) one and only one Car Order Card for each delivery spot on the layout.

The Car Order Card

The Car Order Card has at least the following:

- Industry name and car spot
- The type of car – this may be as detailed as you want as long as the car can be recognized in a location with restricted visibility, like buried in a yard siding.
- Shipping instructions.
- The Car Order Cards are maintained at the yard servicing the particular industry. On large layouts there may be several yards, each with its own Car Order Cards.

The Car Order Card

Optional items:

- The cards may be color coded for multiple yards
- The two sides of a card may have different colors to help identify pickups and holds at the industry siding.

A Typical Car Order Card

YARD A
CAR ORDER
40' BOX
TO BE SETOUT AT

TOWN B
FEED MILL

WHEN CAR HAS BEEN SETOUT
PLACE THIS CARD IN BOX
LABELED

DELIVERED

YARD A
PICKUP ORDER
40' BOX
TO BE PICKEDUP AT

TOWN B
FEED MILL

For shipment WEST
WHEN CAR HAS BEEN RETURNED
TURN THIS CARD AND PLACE IN

CAR ORDERS

At the Yard

Card holders at the local yard should be provided for:

- Open Car Orders
- Each local switching area or job

At the Customer Location

Card holders at the local switching location should be provided for:

- Delivered cars
- Pick up orders
- Hold orders (optional)
- Off spot cars (optional)

Sources of Cars

Cars to fill the car orders can come from two sources:

- Through freights
- Cars in the yard

Important – and very different:

There is no paperwork, cards, or any other record keeping concerning the consist of a through freight.

Yard Operation – Filling Car Orders

When a through freight comes into the yard, the yard crew inspects if for any car that matches the description on one of the Car Orders.

These cars are pulled from the freight and placed on a siding for delivery by a local. Rules for selecting cars are optional.

The Car Order Cards are placed in the appropriate holder for the local crew to take on their assignment.

Local Operation – Delivering Cars

A local crew picks up their train and the stack of Car Order Cards. There is one Car Order Card for each car.

At the customer, the car is placed in the proper spot and the Car Order Card is placed in the Delivered Holder.

Local Operation – Picking Up Cars

When the local crew arrives at the customer's location there will be some Car Order Cards in the Pick Up holder.

The local crew identifies these cars, and picks them up to return to the yard.

Local Operation – Optional Switching Jobs

If desired, other holders can be placed at the customer's location specifying what to do with specific cars.

- Hold – These cars are to remain in place. They may be moved if necessary to gain access to other car spots.
- Off Spot – You may have more than one Car Order Card per spot. If a second car arrives for that spot and a car is there with a Hold order on it, the car must be placed in a location to be handled by another local and the Car Order Card goes in the Off Spot holder.

Local Operation – Self Healing

One of the great aspects of this system is its self healing characteristics. The general rule is:

- If a car is found in the spot where the local crew is to deliver a car and there is no Hold Order (the Car Order Card for that spot is not in the Hold holder) then the last crew missed it. Pick it up and take it back to the yard.

With this rule, cars can not be lost.

Yard Operation – Handling Pick Ups

When the local returns, the cars are shipped according to the shipping instructions on the Car Order Card.

NOTE 1: The direction of shipment and the number of through freights in that direction should be proportional – you need enough through freights to handle the number of cars not sitting on a spot.

NOTE 2: If the yard is getting clogged up with cars, ship them anywhere. Keep the yard working efficiently. It is the key to an operating session.

For Further Discussion and Help

Join the Yahoo discussion group

[CarOrdersMMR](#)

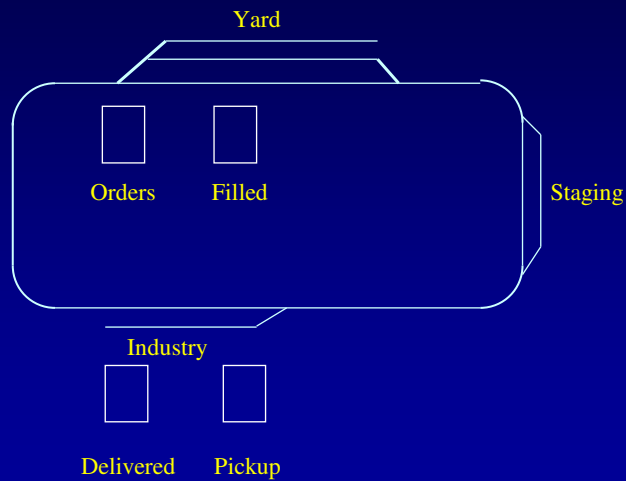
A Simple Operating Session

The following is what occurs during the delivery and pickup of a couple of cars.

A Simple Operating Session

In the following drawings rail cars are represented by a letter in a purple box. The Car Order card is represented by the same letter without the box. The letters 'L' and 'T' indicate the car is part of a local or through freight respectively.

The Layout



The Car Card Holders

There are four basic car card holders:

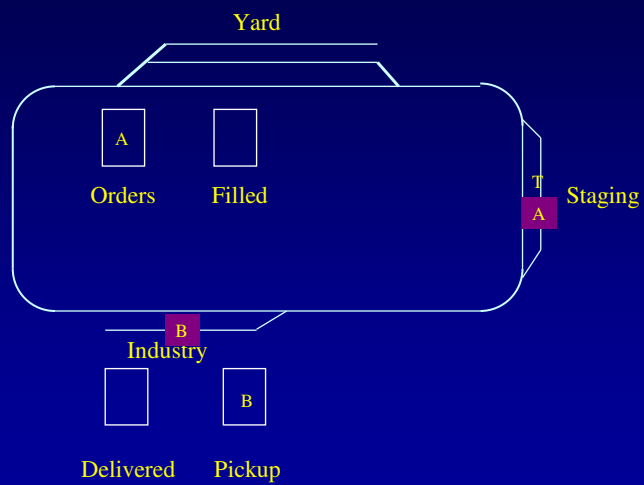
- **Orders:** Orders for a car to be delivered to an industry. This is the big pile of cards at the yard.
- **Filled:** Orders for which a car has been found and placed in a train for local delivery.
- **Delivered:** Cars that have been delivered in fulfillment of an order.
- **Pickup:** Cars that are ready to be picked up for shipment East or West.

Initial Configuration

There is an order for a car to be delivered to the industry. The car is specified by type (A), not by number.

Note in the next slide that there is a car in the staged through freight that will fill the need.

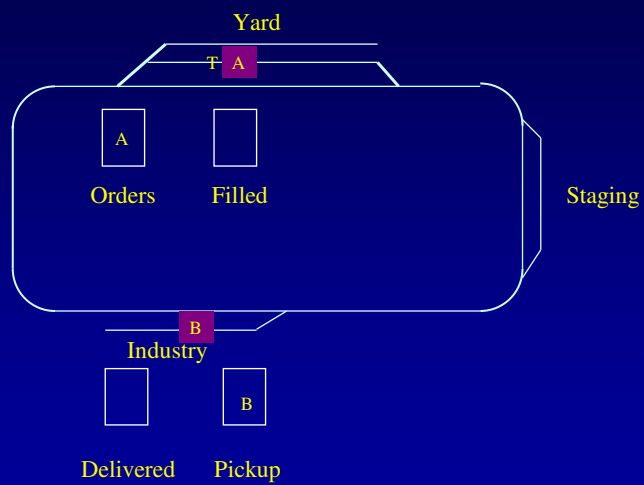
Initial Configuration



A Through Freight Shows Up in the Yard

The through freight has pulled into the arrival/departure track. The yard crew notices that there is a car matching the description of the car in the order pile.

A Through Freight Shows Up in the Yard



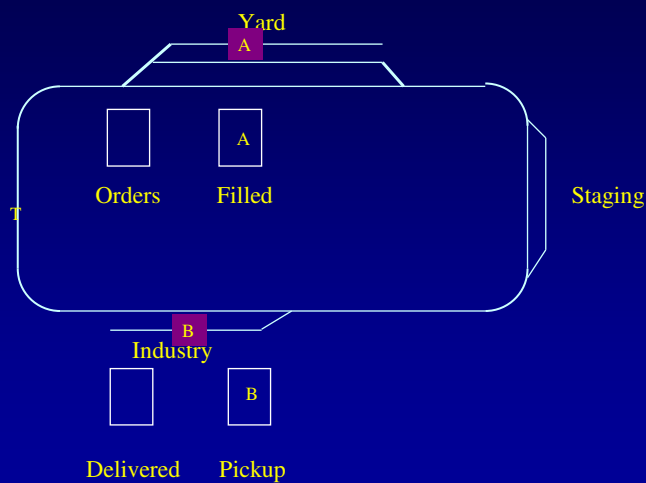
The Yard Crew Goes into Action

The yard crew grabs the car from the through freight and places it on the track for eventual delivery to the industry.

When this is done they move the car order card from the Orders stack to the Filled stack.

The through freight, with any cars the yard crew added to the consist, moves on to other destinations.

The Yard Crew Goes into Action

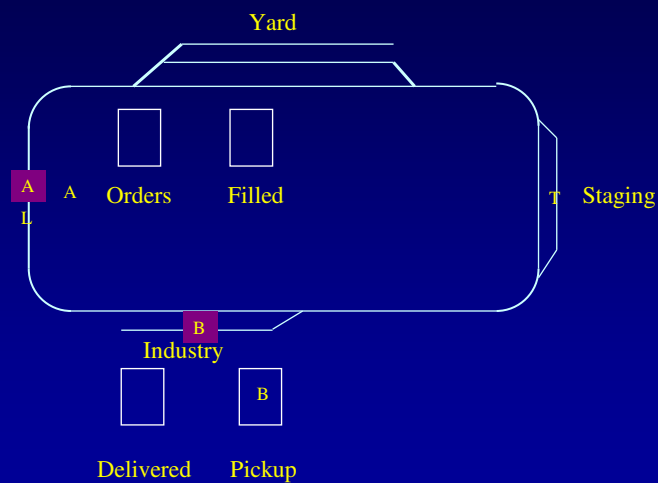


The Local Crew Does their Thing

The local crew gets a call to deliver a car to the industry.

They pick up the train the yard crew has prepared and heads off to the industry, carrying the Car Order Card.

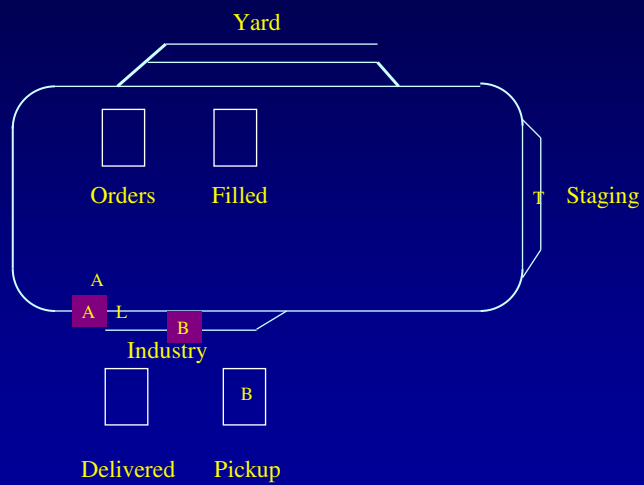
The Local Crew Does their Thing



The Local Crew at the Industry I

At the industry they discover a car (type B) and in the pickup stack is a card requesting this car be taken to the yard.

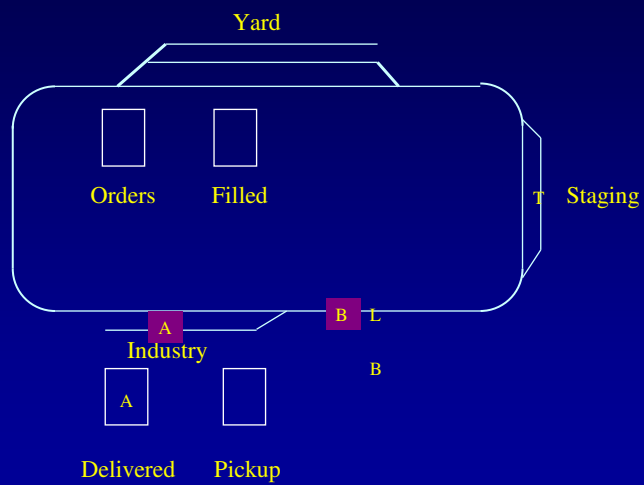
The Local Crew at the Industry I



The Local Crew at the Industry II

The local crew picks up the B car and its car order card.
They drop off the A car and place its card in the delivered stack.

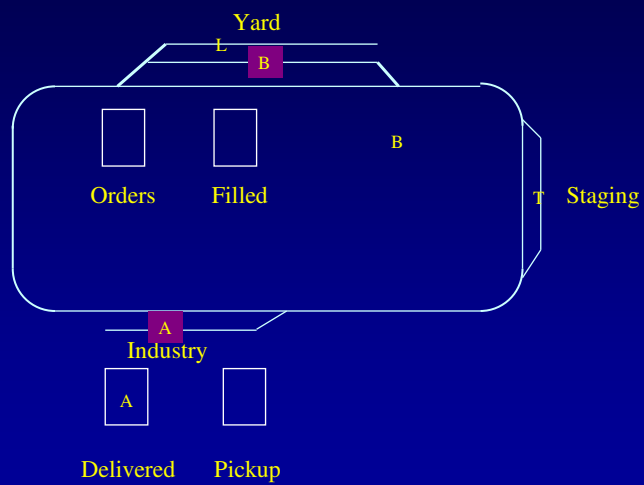
The Local Crew at the Industry II



The Local Crew Returns to the Yard

When the local returns to the yard the car order card is given to the yard crew and the car dropped on the arrival/departure track.

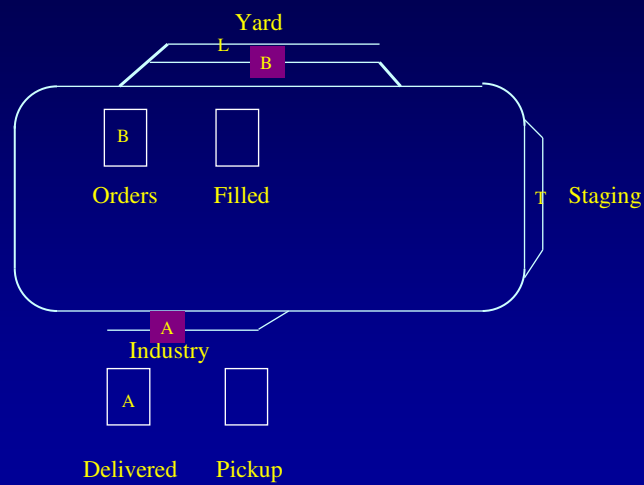
The Local Crew Returns to the Yard



The Yard Crew Goes Back to Work

The car order card may specify the direction the car is to be shipped. The yard crew places the car on the proper track for shipment and the car order card goes to the Orders stack.

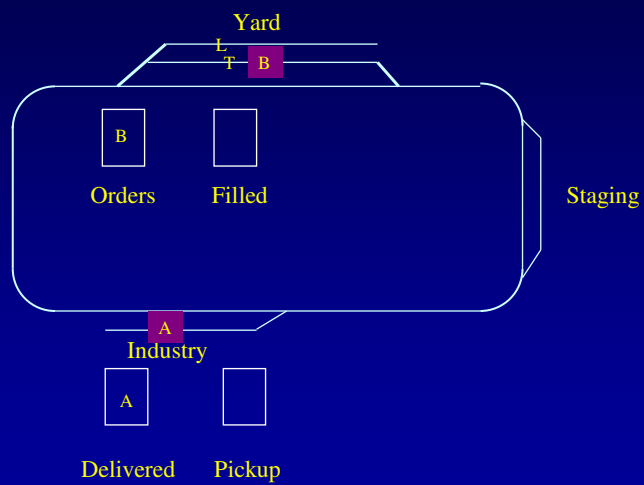
The Yard Crew Goes Back to Work



Another Through Freight Comes By

The through freight picks up all the cars going in its direction.

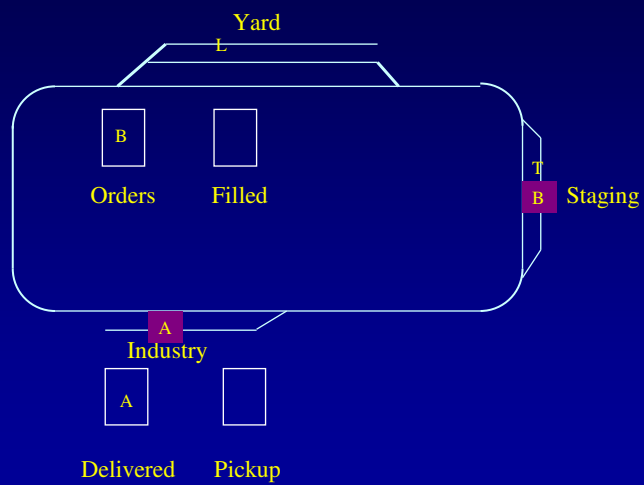
Another Through Freight Comes By



End Stage

The through freight has taken the cars for shipping to the storage tracks and we are ready to stage the layout for the next session.

End Stage



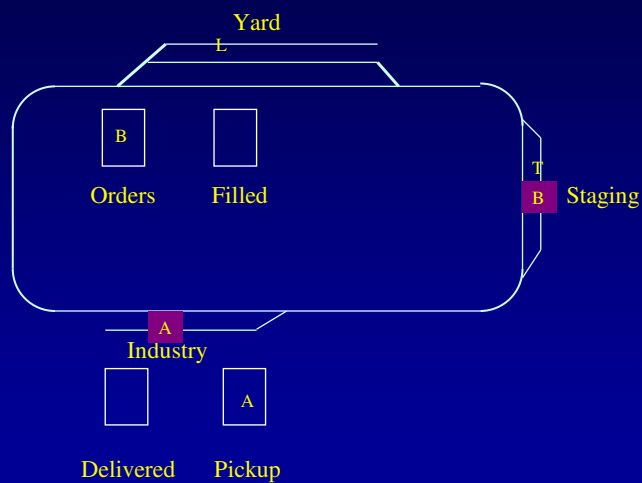
Restaging for the Next Op Session

This is the real beauty of this system.

Simply select some cards from the Delivered stacks at the industries and put them in the Pickup stacks.

Move as many or as few as you want.

Restaging for the Next Op Session



How Do I Avoid Shoving Coal Back into the Mine?

Earl T. Hackett, Jr.

The Problem with Open Loads – You can see them!

The car order system works very well with closed cars because they can be either loads or empties. The operator doesn't need to know if there's something in the car, just where to deliver it.

Most Appalachian coal mines used gravity yards to load cars. Empties would be placed at a high yard, rolled under the tipple by gravity, and then rolled down to a lower yard. So not only do you see the load, there aren't any specific spots where cars are placed and when you come back they're not where you left them!

Managing Loads

There are two ways of mounting loads in an open car

- Glue them in place
- Make them easily removable

If they are glued in place you have to restage bunches of cars. That's a pain.

My solution is to make the loads removable and have the car order card released only when the coal load is removed from the car. Loads can be easily removed with a small suction cup on a shop vac.

The Coal Loads

My coal loads are built on a balsa wood filler block.

Balsa is cheap, light, and strong. A plank $\frac{3}{4}$ " x 3" x 24" sells for \$1.83. I can make loads for all 200+ hoppers for about \$40.

Each load has a label specifying which mine it comes from and the type of car it fits in. There is exactly one car order card for each coal load. The mine name on the car order card will match the name on the coal load so the right car shows up at the right mine.

Moving Empty Cars for Open Loads

Car order cards for hoppers going to the mine specify an empty hopper. At the mine the cars are dropped on the arrival tracks and the loaded cars are taken away. The car order cards are dropped in the Delivered stack as usual.

However, during staging, when the cars are loaded and moved to the load tracks, the car order card for the empty hopper is placed in the car under the load. This takes the car order card for the empty hopper out of operation until the car is emptied.

Moving Coal Loads - I

Picking up loads by the mine shifter is dead easy. If it's loaded, drag it back to the yard.

At the yard there will be car order cards for coal loads. These could be the engine terminal, a power plant, coke byproduct plant, etc. They should be filled from loads that show up from one of the local mines, but may be filled from a through freight.

When two loaded coal trains show up in staging at the same time, one is unloaded.

Moving Coal Loads - II

Coal loads that are not used for local industry could go out on a through freight, but on the prototype they were shipped on an extra train movement. Since the car order card is under the load, the direction of movement would be specified by general order based on the characteristics of the load and car type. Given the location of my layout,

- All coal loads go east to tidewater and power plants
- All coke loads go west to steel mills

Moving Coal Loads - III

When a load is delivered to an industry by a local freight, the car order card goes in the Delivered stack as usual.

During staging or during operation, when the load is removed,

- The coal load is immediately returned its mine
- The empty car order card from beneath the load is immediately placed in the Order stack at the yard