Stock Control Briefing

You are about to play the game *Stock Control*. This game will never sweep the country like Angry Birds, but you will find it engaging and will learn about the concepts of inventory control. The objective is not to uncover the mathematical equations that are used by practitioners, but to develop an intuitive grasp of the relationships between the factors in inventory behavior.

Here’s how it works. The game has nine levels for you to pass. Each level starts with a brief description. Read the description and click “OK” to signify you that you have read it. Then you will have a series of (usually 3) challenges. In each challenge, you control some aspect of the inventory system. Do it well, and you beat the challenge. When you beat all the challenges for that level, you have two conceptual questions to answer. Answer them correctly and you move to the next level. Answer them incorrectly and you try again after another challenge at that level.

Each challenge is worth a maximum of 20 points. If you take too long to beat the challenge, you start losing points. If you answer a question correctly the first time, you earn 6 points. If you get it correct the second time through, you only earn 3 points. If you answer it correctly after missing it twice, you do not receive any points for the question.

Here are a few things from the screen you need to know about.

Across the bottom of the screen are speed controls, the music button, your score, the run/challenge controls and your prizes. Above the words, “Clock speed” is a slider bar, with 6 speed levels. You can change this as needed to make the time run faster or slower. For some challenges a slower speed is helpful, for others a faster speed is best.

The run/challenge buttons start and pause the challenge or move you on to the next one. The Run button toggles between *Run* and *Pause*. The *Next Challenge* button only appears when you pass the current challenge. Click it to move on to the next challenge in the level.

The prize case shows what prizes you have won so far. The prizes are more than status symbols, they support your ability to manage. They either automate a decision for you or reveal helpful information.

The music button will cause some “pump it up” music to play when the challenge is running. It will probably irritate people around you if you are not using earphones. And it might irritate you as well.

For each item you will see a “sawtooth” chart and a stack of inventory. The sawtooth chart is a plot of the inventory level over time. You will notice on the top of the chart it tells you the average demand per day and the current on hand amount. The stack of boxes to the right of the chart also shows you how much inventory you have. As
demand occurs, the amount in the stack will go down. If it becomes red, then you have a backlog that must be filled when your next order arrives.

Each challenge has a control panel. The upper left tells you how expensive this item is, how much it costs per item to hold it in inventory, and what it costs to place an order. Lower left are inventory control buttons. They vary from challenge to challenge. The instructions for each level will tell you about these.

On the right hand side is the performance dashboard. You will see some average values, such as average on hand and average backlog and below these averages are the holding cost and ordering cost bars. The black bar shows the cost, with the specific value shown off to the right. Below the cost bars section are two gauges, one for total cost per day and one for service level. The winning levels are always in the green. (But sometimes, just being in the green is not enough to win, you need to have the best levels.) The cost per day gauge adds the holding and ordering costs together. The service level gauge shows percentage of recent order cycles in which you had enough stock to meet demand. (Well, to be honest, since you don’t have time to wait around all day for the average service levels to play out, sometimes this is the projected service level based on the parameters you have set. Thus it may not always match what you see in the sawtooth chart.)

It is important to note that the performance measures are computed as average values over time. So, as you make changes in your management behavior, the performance numbers will often appear to move gradually over time, because they are still including some past values from before you made the change.

For the quiz questions, click the button of the correct answer and then submit. When answering the questions you have access to your past challenges by clicking the history button. This will pop up the most recent challenge and allow you to scroll through the ones you have done so far. If you answer a question incorrectly, you will have to run another challenge and then be presented with the same two questions again. If you had a question right the first time, the correct answer will already be selected when you return. If you did not answer a question correctly the previous time, no answer will be selected when you are presented with the question a second time.