

How To Operate Cranes



by Frank Seninsky
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After moderating the "Merchandising Seminar" at AMOA last November, it became very obvious to me that some crane operators do little more than throw plush animals into any one of the 23 present models of cranes [in 1999 there are 7 companies making cranes] and hope that the public continues to play forever. A few "bad apples" put in some expensive items that are "very difficult" to win and/or reduce the claw tension to make the prizes harder to win. A second group (the claw adjusters) know exactly what they are doing — and I worry about that. The larger group who practice 'Dump and Run' (throw plush in and forget it), does not know what they are doing, but they should — and I worry about that, too.

For cranes to remain profitable (and publicly acceptable), an operator must always make sure that the customers are winning a fair share of prizes for the money they spend trying. The operator's profit is the amount of money that a satisfied customer is willing to spend to "be entertained". To this end, the crane claw must be maintained and properly adjusted so that all the prizes can be picked up.. Note that the customer does not expect to win every time. The smart operator will, over the long term, maintain a fair win ratio.

A crane, when properly adjusted, is a skill machine that requires a high degree of hand and eye coordination. If the winning percentage is reduced by an operator (I consider 30-35% to be reasonable) either for short-term "greed", lack of proper maintenance or because higher-valued merchandise is desired, the results are always negative and the industry gets hurt! Why not educate yourself and operate the cranes fairly and in a manner that the general public finds acceptable and entertaining? The positive results will benefit you and the industry for a long time to come.

For simplicity I will refer to the two-button Big Choice crane. It is the model that Alpha-Omega (my company) mostly operates and I have worked with the Big Choice for more than three years now [Since 1984 - it was originally called "Good Luck" in Europe]. I have been operating cranes, diggers and merchandise equipment since 1969 (legally in New Jersey) and naturally wish to continue . . . so it is important to me that the well-intentioned crane operators know what they are doing.

How To Stock A Crane

There are a few different philosophies on what value and type of merchandise to use. The term "hit frequency" is often used and it plays a major role in keeping crane players coming back as does winning free games on a pinball machine. Putting in only \$1.50/each plush and having the customer win once in every 24 tries (25 cents/play) is not a good method of building up a legion of satisfied customers. Putting in enough 25 cent, 50 cent, and 75 cent items to balance out the "average prize price", so the customer wins more often, is a better long-term approach. If you want to use high-priced prizes, I feel it is better to raise the price-per-play to 50 cents or even \$1 and let the customer win more often, rather than to make the items "very difficult" to win. Either way, the use of many high-priced items will most surely draw negative attention from the public and especially law enforcement officials, as the crane will no longer be the "innocent machine" it was intended to be!

After much trial, error and absorption of advice from long-time crane operators, I feel confident about passing along to you some basic laws of crane operation. Spend some time testing and working with your crane and the several types of merchandise you intend to use. Each item must be able to be picked up by the claw. The percentages will take care of themselves if you do the following for a 25 cents-per-play crane : Zero in on an "average prize cost" of \$1.00 that corresponds to a 30% win rate with a hit frequency of 1 in 12. Once you have this "base line" set up, it's very easy to increase the win rate slightly, through claw adjustments and /or by increasing the average prize price (by adding some items priced above \$1.00 or taking out some items priced below \$1.00).

"\$1.00 average" — Make up a list of the number and cost of each different prize you wish to load into your crane section (a triple has three sections, a single has one). The total cost of all the prizes, divided by the total number of prizes is the average prize cost.

"30% win rate" — I can feel comfortable that my win rate will come out at about 33% when the players are winning once every 12 times and I have stocked the crane with a \$1.00 average prize cost. Your gross collections and an inventory count at the end of the week will tell you if you're right on, high or low.

The more often you reload the crane and "fluff up" merchandise, the better your crane will look to the customer and the

more your crane will gross. Remember, "crane dressing" (the art of stocking a crane) is a very creative job and should not be taken lightly. Lining up the prizes all facing front is much more attractive than the "dump and run". I also recommend using a one-and-a-half inch depth of the regular plastic granular beads that come with the crane if you are using items other than plush (jewelry, watches, calculators, etc.).

To get starting base lines for cranes with 50¢, 75¢, and \$1.00 per play, with a hit frequency of 1 out of 12, use the proper multiple of the average prize cost.

The level of merchandise in a crane also effects the win rate. When the crane is 100% full, it is easier to win the prizes. As the level goes down, the weight of the claw tends to pack down some of the prizes,. The win rate increases from 2/3 full to 1/3 full. When the level falls below 1/3 full, it gets easier to win. The inverse bell curve closely shows this swing in win rate.

Adjusting The Claw

The figure below shows the two positions that the claw cam can be set in. The large opening is for medium plush size and very light-weight "slum" or smaller plush. The smaller opening is for picking up small, solid objects like jewelry and watches that are not in large cases. The claw open rest position is set from 2.5 to 4 inches. If you want to mix, say, watches and plush in the same crane section, the watches must be placed in boxes or cases to make them larger, and you must set the claw cam to "large".

Crane Maintenance

A few drops of automobile motor oil on the cart rollers and gears, travel rods and the claw mechanism will reduce cart friction, string wear and breaking. On a new crane, the cart rollers and travel rods should be oiled after the first week of operation and then again after each year. The claw string should be oiled after the first 5,000 plays and then again after each 25,000 plays. The claw mechanism is engineered for 350,000 trouble free plays, and if maintained properly, can go on for another 350,000 plays.

Most of the service calls I receive on the Big Choice crane are due to the claw string wearing out and breaking. Note: only about 3 feet of string is required, but the crane comes with almost 6 feet of string attached to the claw. You can usually find a 3' length remaining of the original string, even after a few breaks, but why not eliminate the wear problem first off? If you have a problem where the original 6' string doesn't wind up correctly, reducing the string length will eliminate this from happening again.

To greatly reduce the string wear, there are a few options:

-put a few drops of motor oil on each claw string after the first 5,000 plays and then after every 25,000 plays; or

-replace the free floating washer that goes between the top of the claw and the spring (up-stop absorber) with a ¼" long x 3/8" Dia. plastic spacer. You can just take a standard plastic pen case and cut (and smooth the edges) a ¼" long hollow section. By replacing the washer with the pen section, you don't have to keep oiling the string; or

-go to a fishing supply store and buy the best nylon fishing reel wire, of the same thickness as the original string and use this.

My suggestion: Of all the options you have to reduce string wear, the first one 'a)' works the best.