

INTERNATIONAL
BOWLING INDUSTRY

Vol. 28 | December 2020

THE WORLD'S ONLY MAGAZINE DEVOTED EXCLUSIVELY TO THE BUSINESS OF BOWLING

**THE NEXT
BIG**



**WILL STRING MACHINES
BECOME THE NEW NORMAL?**

**RIGHT BACK WHERE
WE STARTED**

**WHIRLYBALL:
A WHOLE NEW GAME**

THE NEXT BIG THING?

Will string machines become the new normal?

■ By Fred Groh

HOUSE SHOT

By the numbers, string pinsetters are almost a no-brainer for proprietors.

When David Breen remodeled his Milford, MA, house, Pinz, three years ago he replaced 20 lanes of free-fall pinsetters that “were running perfectly—fantastic machines” and installed string machines.

Initial cost of string compared to free-fall: “Very similar,” he related.

Installation/setup for a string machine: “Two guys can lift it and put it into place.”

The cost of parts, where string machines have as few as 60 moving parts and free-falls up to 1,000, is “a lot less.”

Pins: “They don’t rotate like in a free-fall machine where you have 20 pins, but I find I’m not replacing all ten pins in the machine as much as

I’m replacing maybe the first couple of rows.” Overall, roughly twice the service from pins on string machines.

Power: “Electricity consumption went down 30% on average in the building.” (Saving on pinsetters alone can’t be isolated because Breen gets a consolidated bill.)

Time required for a staffer to learn the basic operation: “Fifteen minutes.”

Time required to become proficient in the machine: “An hour.”

Maintenance:

“A monster difference. Every day when the manager shows up, [he does] a quick calibration [on the strings], which takes about a minute per machine. We just make sure everything is running right. Probably 15 minutes a day.”

He has no mechanic on staff.

“When I converted Milford, I looked at what I was spending weekly on a mechanic, what I was spending annually for my parts, my energy



David Breen

consumption. Once I tied those three numbers together—and I included on busy nights having a pinchaser behind the lanes to babysit, if you will—I save about \$6,000 a month by going to string pinsetters.”

Breen calculates that the changeover is costing him next to nothing, because the purchase is running per

month just about the same as he is saving. And once his contract is paid off, he'll be putting about \$70,000 a year in his pocket at current business levels.

The figures reported by other proprietors we spoke with were different, of course. But all the numbers ran in the same direction, especially when it came to mechanics, except for one number if you are a league-heavy house: the number of hardcore bowlers.

PLAYER'S SHOT

Bumpers and glow were innovations that everybody welcomed. The public was enchanted and proprietors made money. Nobody was hostile.

Not so with string bowling. String machines typically have a mask in place of the sweep that shields the resetting from view, and the back-end area is in darkness to hide the strings. But the very fact that these seemed good ideas testifies to the skepticism, even downright hostility, that bowling purists often voice about string machines.

Comments from various websites:

“Just found out my only local bowling alley is converting all the lanes to pins on strings. Honestly, it sounds terrible.”

“RIP your local bowling alley. I can't imagine any center that's taking the sport of bowling seriously would make that move.”

“I just feel that while I'm not a traditionalist in the strictest sense, I think having the pins on strings is definitely against the

spirit of the game at a fundamental level.”

“As a pinsetter mechanic I find them stupid. As a bowler, I think they are an insult to the game. For example, if a pin slides off spot on a [free-fall] pinsetter lane, you shoot the pin where it ends up. [A] string pinsetter picks it up and puts it down where it was originally on spot, so you're not making the same shot, which could affect the outcome of the game.”

“Attaching nylon cords to the top of pins has a whole host of negative effects on pin action, which, for any installation that intends to be a competitive bowling facility, is unacceptable.”

“It isn't 'true' bowling, and the pins will have different physics.”

“It sucks.”



Cassandra Leuthold would talk physics with her professor when she was in college ten years ago. Dr. Tim Gay, professor



COVER STORY

of physics at the University of Nebraska in Lincoln (UNL), recalls “many interesting discussions about the motion of the ball on a differentially-oiled surface.”

“It is scientifically impossible,” says Leuthold, “to *exactly* duplicate on a stringpin machine the flight and fall of pins on a free-fall pinsetter.”

Cassandra Leuthold is also a bowler. NTCA Rookie of the Year (2006), Junior Team USA member (2007, 2009), NCAA Championships Most Outstanding Player (2009), all told 11 singles titles between matriculation in 2005 and graduation in 2010. At the start of her senior year her coach, the renowned Bill Straub, called her “as good a player as there is in the country.”

Leuthold practiced on six string machine lanes at the UNL campus 15 to 20 hours a week. Free-fall machines, she knew from age four, when she started in the game.

With string, “I didn’t notice that much of a difference, other than the pins falling a little bit flatter,” she told us. “Our machines were prone to leaving corner pins. It was very hard to knock out the 10 pin, for a right-hander; for a left-hander, the 7 pin, [but] I believe that was due to the distribution of weight in the pin,” she explained.

In order to attach the string, the top of the pin has to be cored. This slightly alters the weight of the pin at the top, making it a little bottom-heavy, which alters the center of gravity. “Bowling being a very technical sport, that slight shift in weight can have an impact on your score,” Leuthold said.

“Is it going to be noticeable? It depends on how powerful a bowler you are. If you are powerful, it will be less noticeable because you will have a higher chance of knocking it over. That’s just pure physics—force = mass times acceleration.”

If you’re not so powerful, it may be very noticeable and seem very deserving of criticism. But supposing pins were counter-weighted for string machines, which would Leuthold prefer to bowl on?

“For higher score, I would go for the free. For challenge and skill, I’d go with string.”

Which seems counter-intuitive. Strings will sometimes tangle or clip other pins, either way taking them down. That’s why people think the strings do the bowling for you, at least some of it, one reason the hardcore are suspicious of string bowling.

“The pins are harder to knock down on a string machine,” this superb bowler said again.

“The other unique thing about string machines I noticed the first time I walked into the UNL campus lanes was [that] the lane machines were on but you



Cassandra Leuthold

couldn’t hear them. Not as noisy. You can actually hear people.

“I’d tell a person walking in, it’s a different experience. Go in with an open mind. The pinfall might be a little more challenging but if you welcome it, it will be a good teacher. People think that the string [will] interfere with pinfall, but, really, it doesn’t.”

The key to hardcore bowlers’ accepting string machines would seem to be the challenge in a string game. A serious bowler plays the lane, the ball, and the pins. Together these make his signature game. If he can transfer most of that game successfully to string lanes—if, say, only five percent of the game can’t be used with a string pinsetter or if he has to learn a new five percent for string—so that the challenge of the game is the same, he would probably be a happy camper, er, bowler on string. Would Leuthold agree?

“Yes, absolutely.”



“If a good portion of your business is USBC leagues, the business case is still there, it’s just that your model is not going to lend itself easily to moving to string. You could save the money, but you [might] lose customers,” said Neil Pennington, director of product management for performance equipment at QubicaAMF.

Hence a two-day tournament promoting string bowling, “Some Strings Attached,” hosted by QubicaAMF. The event was held July 25-26 at HeadPinz in Naples, FL.

Twelve invited pros who had never bowled on string and 53 first-come, first-served open-play bowlers rolled about 600 games. Lanes were evenly split between string and free-fall. Players rotated so that each bowler rolled



Neil Pennington



COVER STORY

an equal number of games on free-fall and on string. Game differences, from pro and competitive bowler observations, reported by Pennington:

▶ "Strikes are slightly harder to carry than on free-fall. Specifically, good solid pocket hits carry well and are rewarded with strikes, just as with free-fall. Light pocket and half-pocket hits don't carry as well, resulting in fewer of these types of strikes than typically seen with free-fall.

▶ "Spares and splits are a little easier to pick up than on free-fall. This is due in part to strings sometimes knocking down other pins. Also, pins sometimes rebound from the pit a little more easily than they can on free-fall.

▶ "The easier spare and split conversion behavior seems to make up for fewer light hit and half-pocket hits that don't carry to be strikes, resulting in similar overall scoring between string and free-fall."

Highly similar scoring. The average score was 203.43 on free-fall for the two days of play, 204.76 for the string lanes. The difference is 1.3 pins.

Is game score a good way to compare the challenge on the two machines?

Yes, says Pennington. "At the end of the day, that's what everybody is competing for. That's how you know who the best bowler is." Bowlers will tend to evaluate string versus free-fall that way, he added.

Yes, says Leuthold. "Whatever you hit counts as what is knocked over, and the goal is to knock down as many pins as possible."

The theory seems to be that the signature game in



combination with the playing conditions (lane, ball, pins) creates the challenge in a game. That also produces the total game score, so the score can serve as a measure of the challenge. If the scores are virtually the same, so is the challenge.

FUTURE SHOT

Whether string machines are going to be the next big thing in bowling doesn't depend on hardcore bowlers. There are too few of them. But for some proprietors, they are all-important.



Brent Pfluger

Brent Pfluger, director of scoring operations and chief technology officer for US Bowling, sympathizes with the hardcore. "I understand the old-school bowling. There are going to be those bowlers, moms and pops—my grandparents were [among] them—that refuse. 'A string machine, why?'

"The strings don't interfere with the play as much as most people would think. The strings are slack. Even if you were to have two pins fall over and pull

the string, there's enough string in there to take the headpin all the way to the back of the machine. It's going to be: either you like it or you don't."

Resistance to string is something of an old story in the experience of Mike Resterhouse, mechanical engineering product manager for Brunswick. "I've heard similar stories about all the products in bowling, like going from a wood lane to synthetic lanes, and talk about the balls, the reactive components, and the lane conditions. 'Oh, they ruined bowling by making these balls' or whatever. I think you just adapt and overcome. If they love the



Mike Resterhouse

sport, I don't think they're going to leave the sport."

"You love what you love the way it is," Jen Waldo, Brunswick's global marketing manager, agreed. "They're competitive and they want to keep that purist element of their game. I think there is probably some perception out there based on older technology, [but] we're seeing a lot of activity and application [of string] in different environments. Hopefully people will begin to change their perceptions."

"It comes down to, how do you educate the league bowler?" said proprietor Breen. "It's going to have to come from the top, BPAA, USBC."

Anthony DeCotis, owner of Gametime in Amesbury, MA, thinks along the same line. He has more than 500 league bowlers in his "very competitive house" and most of his leagues are sanctioned.

"Every time I invite people to come see it [string], they walk away with a really good feeling about the machine," DeCotis reflected. Still, "we are looking for the help of the USBC in getting these [machines] sanctioned."

Breen offered a prediction: "If these bowlers don't adapt and change with what's going on—because it's going to happen [string dominance]—the sport dies. But ten years from now, the younger generation will have bowled on strings and I don't think



it's going to be that big a deal. The bigger deal right now is the older player. The older demographic is really struggling with it."

Pennington is unequivocal. "I think string is going to be the next big thing for bowling. It's good for bowling, for the sport



Gametime, Amesbury, MA

of bowling, because it allows centers to be more competitive with other types of entertainment—FECs, Top Golfs, movie theaters, a myriad of things—and that's good for the longevity of bowling. I think the competitive side will take a little time. They'll need more experience on the machine." ❖



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