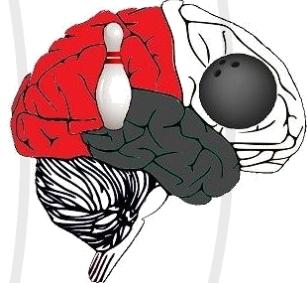


BOWLOLOGY



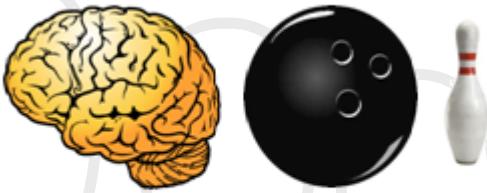
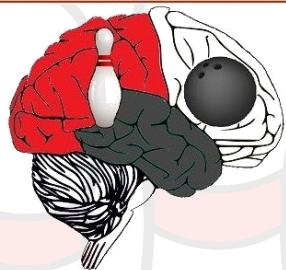
Ten Pin Staffers

Josh Hyde Bowling Presents:

An Instruction Manual for Bowlers, Pro-Shop

Operators, and Coaches

STRIKING MASTERMIND



BOWLOLOGY

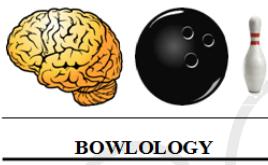
Ten Pin Staffers

Introduction

Hello, my name is Josh Hyde. I am the founder of Josh Hyde Bowling. Bowling is a sport. Three elements of bowling make it a sport: the teaching/learning aspect, tournament play and a professional level. This manual will provide the tools necessary for bowlers, coaches, and pro shop operators to help other bowlers improve their game regardless of their bowling skills. There are several challenges that bowlers face which often hinder them from advancing their game. This manual addresses those concerns.

I am a bronze USBC certified coach and the Editor of the Josh Hyde's Bowling Newsletter. Additionally, I have been an honorary member of the PBA since 2001. I have also won 18 IBMA amateur writing awards.

This manual is dedicated to Roger Hyde, my Dad, who has taught me a great deal about the sport of bowling. To the USBC coaching staff - Teresa Ross and Stephen Padilla – thank you both for helping me with getting my USBC bronze level coaching certification.



Bowlology

The study of bowling, with the student gaining more knowledge of and more respect for the sport.

Overview of Bowlology

- To help bowlers, from beginner to advanced, understand the game of bowling .
- Josh Hyde, a USBC Bronze Level coach, shares his knowledge of the game.
- Bowlology is a column in the Josh Hyde's Bowling Newsletter.

Bowlology Philosophy

"Bowlology"—the study of bowling with the desired result being that the student gains more knowledge of and more respect for the sport.

Serious bowlers know the bowling lingo today. However, when there are new bowlers or a family of four going out to bowl—they are not aware of some of the specifics of the sport of bowling.

I went bowling one time, and my caregiver stepped over the foul line nearly falling. She did not know that there was oil on the lane, so I told her. She asked why, I explained to her that it is like golf where there are trees, bunkers, water hazards, and rough. I also explained that this helps the bowler know where to throw the ball and where not to throw the ball. Then she was able to understand.

I had another caregiver who bowled and had high-performance bowling balls yet could not describe pin location to me. She also told me she had bowled a 240-game and a 250-game, but did not shoot a 600 series. On top of that, she told me she was better at converting splits than spares. She was a right-hander but slid on the right foot instead of the left foot.

A golf professional that I know once told me that he would take a first-time golfer out on the range and work with them on their driving, chipping and putting before they could even go play a round of 9-holes.

There is no expectation for a first-time bowler. Many, when they start, do not want to get serious about the game. At the same time, there should be some guidance for first-time bowlers to learn basic bowling techniques. There is generally no one at the bowling center to help first-time bowlers learn more about the game. Yes, they may just want to bowl one time a year; but if they want to learn something more, there is no one to help them strengthen their knowledge of bowling.

The caregiver with the high performance bowling balls would have been better off with a simple ball and instead focused on learning bowling basics.

USBC is trying to educate bowlers better with Welcome to Bowling. This can be found on bowl.com. There are videos that help the first-time bowlers to know what to do next. A pro shop operator can tell the first-time bowler to go to the website to learn more bowling information. Maybe this will help motivate the first time bowler to improve their game, approaching it with more seriousness, which will, in turn, promote bowling as a legitimate sport. This is the philosophy of bowlology.

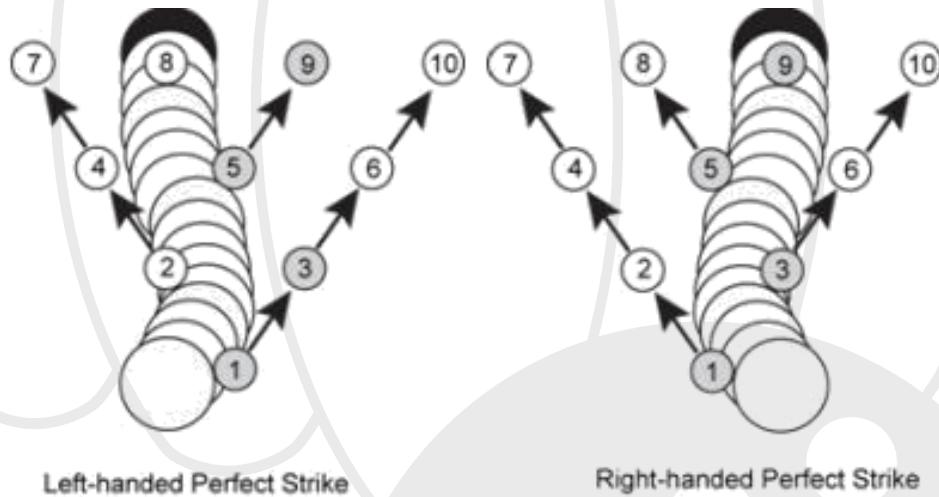
The Perfect Strike

Many non-bowlers do not know the difference between a good strike and a lucky strike.

In a perfect strike, the ball hits between the 1 and 3 pins. The ball only hits four pins in a perfect strike—the 1, 3, 5, and 9 pins for a right-handed person and the 1, 2, 5, and 8 pins for a left-handed person.

First, the head pin must be hit at the 5 o'clock mark (if the pin were a clock). Next, the ball then hits the 3 pin at the 8 o'clock mark as the head pin takes down pins 2, 4, and 7.

Lastly, as the 3 pin takes down the 6 and 10 pins, the ball hits the 5 pin (which knocks down the 8 pin) and the 9 pin. This gives the bowler a perfect strike.



Timing

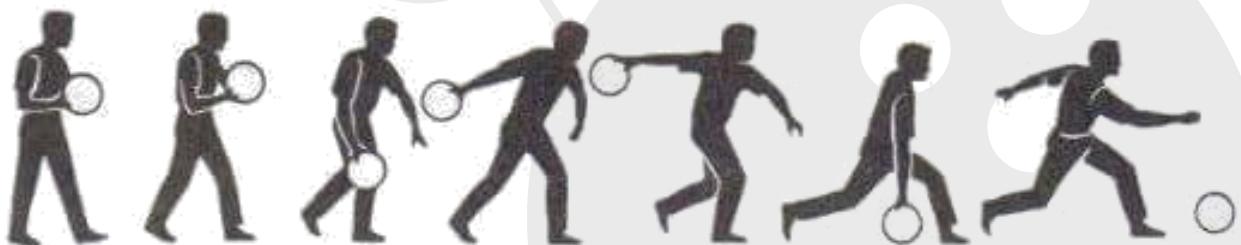
Bowling can be simple if a bowler has a good solid game with his/her timing. A good example of good timing is a string attached to the bowler's toe and finger. If a bowler has a string tied to both when the foot moves the finger will follow. This is good synchronized timing. So many bowlers think that they need a different ball, but maybe they need to work on their timing instead.

Early timing is when the ball is pushed out without movement of the foot. Late timing is when the foot is moved prior to moving the ball. Early or late timing can cause the bowler to pull the shot causing the ball to go brooklyn or be light in the pocket. Early or late timing can also eliminate a bowler's possibility of having a pendulum swing. If the bowler is always trying to get the ball back in the right position, he/she is not letting gravity take charge of the bowling swing.

Common mistakes to avoid:

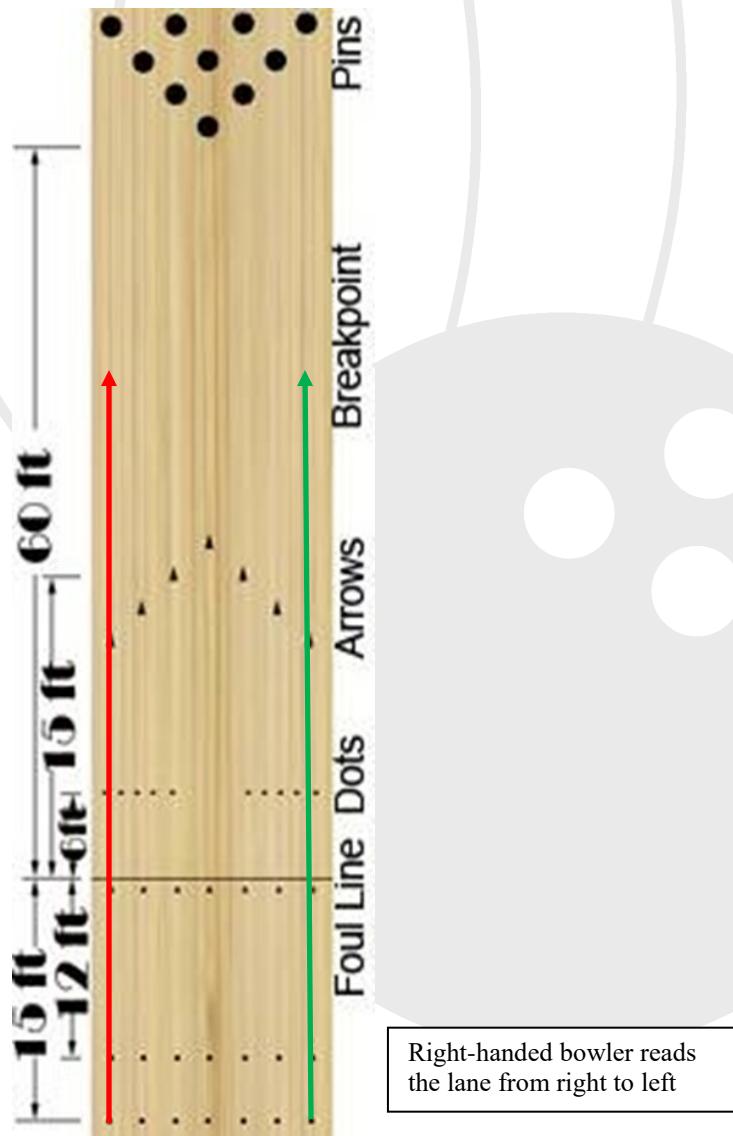
- Getting fast with the feet
- Pushing away inconsistently leading to being early or late with the timing
- Muscling the shot
- Allowing the swing to bump outward from the body in the early stages which causes the ball to loop
- Dropping the ball into the swing
- Holding the ball in front of the torso so that the arm must swing circuitously just to clear the body
- Failing to concentrate fully on all shots, even the seemingly easy ones

These are just some of the mistakes to avoid with a bowler's timing. See the diagram below for an example of good timing.



Reading the Lanes

In bowling there are a series of dots, arrows, and pins. There are five boards between each dot and the first dot on the lane is known as fifth board. The fifth board is also the first arrow between the foul line to the headpin is 60 feet. From the foul line to the start of the approach is another 15 feet. The middle arrow is the 20th board and it is also where the headpin is positioned. Right handers (Righties) read the lane from right to left. Left handers (Lefties) read the lane left to right. Bowlers should look at the arrows rather than the pins at the end of the lane before the ball goes past the arrows, this will lead to more consistent pocket shots. Looking closer is better than looking further down the lane. The figure below shows the general layout of the lane and positions for the Left-Handed and Right-handed bowler arrows.



Bowlology - Keeping Score

- Strike = “X” (10 pins) + next two balls
- Spare = “/” (10 pins) + next ball
- Open = “-” two balls added together
- Split = Circle around # Frame 3) on score sheet
- Tenth Frame – if a bowler scores a spare or strike. They get one to two extra balls.

1	2	3	
X	9 /	8 1	
20	38	47	

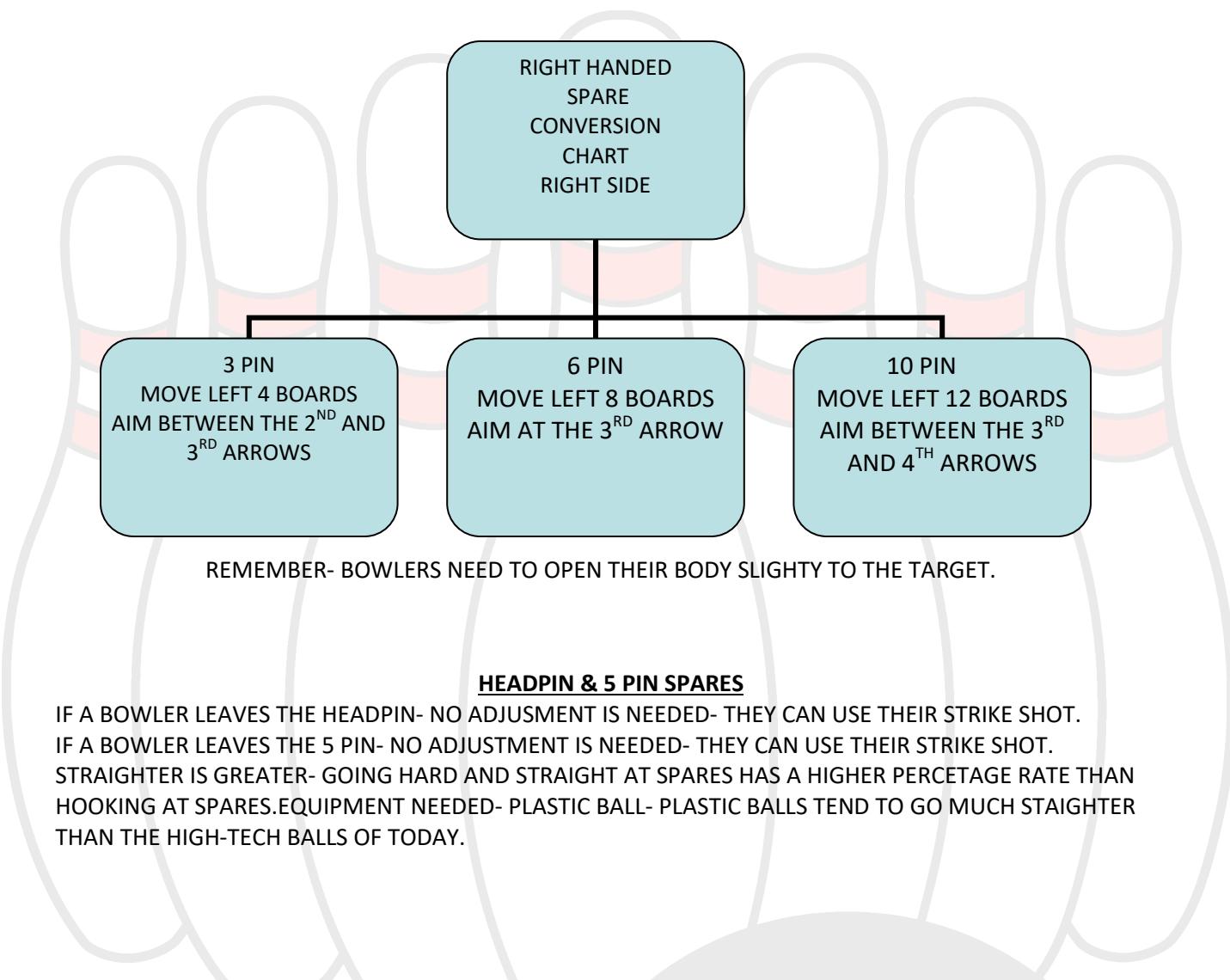
Release

In the delivery, the bowler releases the ball with the thumb exits first followed by the fingers like he/she is shaking hands with the second arrow. This creates side rotation on the ball resulting in maximizing pin carry and higher scores. The ball rotates in a clockwise manner for left-handed bowlers and in a counterclockwise manner for right-handed bowlers. Conversely, if the bowler over rotates on his/her release, called topping the ball, the ball will react in a spinning motion away from the pocket.

The bowlers wrist position—cupped vs. straight— affects how the ball reacts on the lane. In a cupped position, the wrist will unload at the point of the bowler's release, creating more revolutions causing the ball to hook more. When the wrist is in a straight position, the ball remains neutral as it is migrating toward the pins.

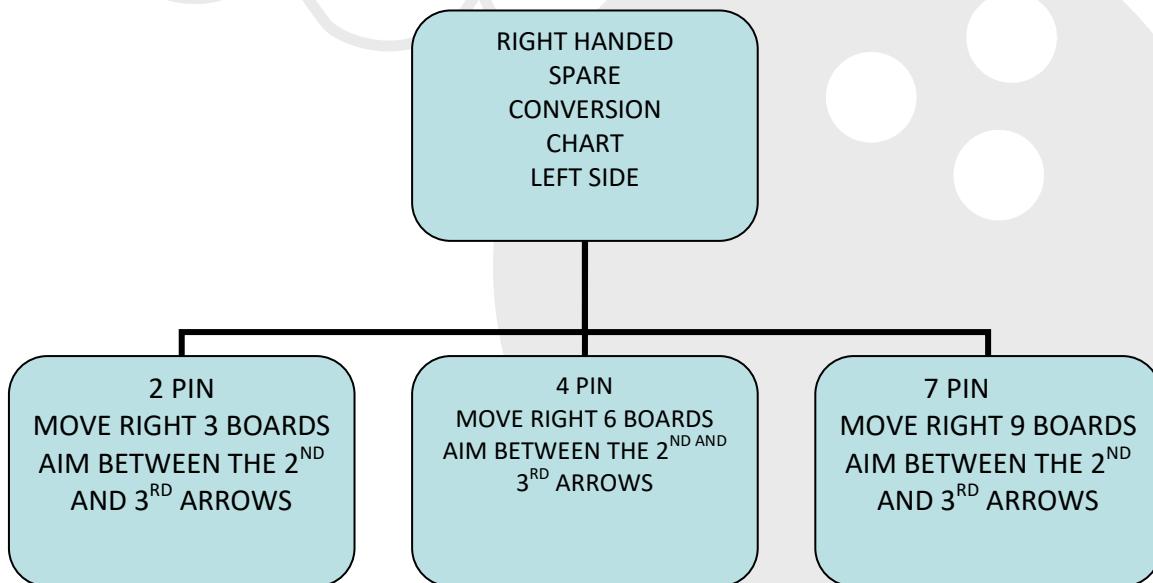
The three main elements of an accurate bowling ball release are thumb release, wrist rotation, and finger release.





HEADPIN & 5 PIN SPARES

IF A BOWLER LEAVES THE HEADPIN- NO ADJUSTMENT IS NEEDED- THEY CAN USE THEIR STRIKE SHOT.
 IF A BOWLER LEAVES THE 5 PIN- NO ADJUSTMENT IS NEEDED- THEY CAN USE THEIR STRIKE SHOT.
 STRAIGHTER IS GREATER- GOING HARD AND STRAIGHT AT SPARES HAS A HIGHER PERCENTAGE RATE THAN HOOKING AT SPARES.EQUIPMENT NEEDED- PLASTIC BALL- PLASTIC BALLS TEND TO GO MUCH STRAIGHTER THAN THE HIGH-TECH BALLS OF TODAY.



REMEMBER- BOWLERS NEED TO CLOSE THEIR BODY SLIGHTLY TO THE TARGET.

LEFT HANDED
SPARE
CONVERSION
CHART
RIGHT SIDE

3 PIN
MOVE LEFT 3 BOARDS
AIM BETWEEN THE 2ND
AND 3RD ARROWS

6 PIN
MOVE LEFT 6 BOARDS
AIM BETWEEN THE 2ND
AND 3RD ARROWS

10 PIN
MOVE LEFT 9 BOARDS
AIM BETWEEN THE 2ND
AND 3RD ARROWS

REMEMBER- BOWLERS NEED TO CLOSE THEIR BODY SLIGHTLY TO THE TARGET.

HEADPIN & 5 PIN SPARES

IF A BOWLER LEAVES THE HEADPIN- NO ADJUSTMENT IS NEEDED- THEY CAN USE THEIR STRIKE SHOT.

IF A BOWLER LEAVES THE 5 PIN- NO ADJUSTMENT IS NEEDED- THEY CAN USE THEIR STRIKE SHOT.

STRAIGHTER IS GREATER- GOING HARD AND STRAIGHT AT SPARES HAS A HIGHER PERCENTAGE RATE THAN HOOKING AT SPARES.

EQUIPMENT NEEDED- PLASTIC BALL- PLASTIC BALLS TEND TO GO MUCH STRAIGHTER THAN THE HIGH-TECH BALLS OF TODAY.

LEFT HANDED
SPARE
CONVERSION
CHART
LEFT SIDE

2 PIN
MOVE RIGHT 4 BOARDS
AIM BETWEEN THE 2ND
AND 3RD ARROWS

4 PIN
MOVE RIGHT 8 BOARDS
AIM AT THE 3RD ARROW

7 PIN
MOVE RIGHT 12 BOARDS
AIM BETWEEN THE 3RD
AND 4TH ARROWS

REMEMBER- BOWLERS NEED TO OPEN THEIR BODY SLIGHTLY TO THE TARGET.

21 MULTIPLE COMMON/MAKEABLE SPARES

Left Hand		
SPARE	Move	Target
3-5-6	3 Boards Left	Aim between the 2nd and 3rd arrow
1-3-9	2 Boards Left	Aim between the 2nd and 3rd arrow
3-6-9	3 Boards Left	Aim between the 2nd and 3rd arrow
6-9-10	5 Boards Left	Aim between the 2nd and 3rd arrow
2-4-8	6 Boards Right	Aim between the 2nd and 3rd arrow
2-4-7	6 Boards Right	Aim between the 2nd and 3rd arrow
4-7-8	8 Boards Right	Aim between the 2nd and 3rd arrow
1-5	Strike Shot	Aim between the 2nd and 3rd arrow
3-6	5 Boards Left	Aim between the 2nd and 3rd arrow
3-9	3 Boards Left	Aim between the 2nd and 3rd arrow
2-4	5 Boards Right	Aim between the 2nd and 3rd arrow
6-10	8 Boards Left	Aim between the 2nd and 3rd arrow
6-9	6 Boards Left	Aim between the 2nd and 3rd arrow
5-9	1 Board Left	Aim between the 2nd and 3rd arrow
5-8	Strike Shot	Aim between the 2nd and 3rd arrow
4-7	10 Boards Right	Aim between the 2nd and 3rd arrow
1-3-5-6	5 Boards Left	Aim between the 2nd and 3rd arrow
1-3-6-10	6 Boards Left	Aim between the 2nd and 3rd arrow
1-3-6-9	6 Boards Left	Aim between the 2nd and 3rd arrow
3-5-6-9	3 Boards Left	Aim between the 2nd and 3rd arrow
2-4-7-8	6 Boards Right	Aim between the 2nd and 3rd arrow

Right Hand		
Spare	Move	Target
2-4-5	3 Boards Right	Aim between the 2nd and 3rd arrow
1-2-8	2 Boards Right	Aim between the 2nd and 3rd arrow
2-4-8	3 Boards Right	Aim between the 2nd and 3rd arrow
4-7-8	5 Boards Right	Aim between the 2nd and 3rd arrow
3-6-9	6 Boards Left	Aim between the 2nd and 3rd arrow
3-6-10	6 Boards Left	Aim between the 2nd and 3rd arrow
6-9-10	8 Boards Left	Aim between the 2nd and 3rd arrow
1-5	Strike Shot	Aim between the 2nd and 3rd arrow
2-4	5 Boards Right	Aim between the 2nd and 3rd arrow
2-8	3 Boards Right	Aim between the 2nd and 3rd arrow
3-6	5 Boards Left	Aim between the 2nd and 3rd arrow
4-7	8 Boards Right	Aim between the 2nd and 3rd arrow
4-8	6 Boards Right	Aim between the 2nd and 3rd arrow
5-8	1 Board Right	Aim between the 2nd and 3rd arrow
5-9	Strike Shot	Aim between the 2nd and 3rd arrow
6-10	10 Boards Left	Aim between the 2nd and 3rd arrow
1-2-4-5	5 Boards Right	Aim between the 2nd and 3rd arrow
1-2-4-7	6 Boards Right	Aim between the 2nd and 3rd arrow
1-2-4-8	6 Boards Right	Aim between the 2nd and 3rd arrow
2-4-5-8	3 Boards Right	Aim between the 2nd and 3rd arrow
3-6-9-10	6 Boards Left	Aim between the 2nd and 3rd arrow

**REMEMBER— IT IS BETTER TO TAKE AS MANY PINS OUT AS POSSIBLE
WITH THE BALL RATHER THAN SOLELY RELYING ON PIN ACTION.**

MAKEABLE SPLITS

SPLIT	Move	RH-LH	Target
2-4-7-10	6 Boards Left	LH	Aim between the 2nd and 3rd arrow
3-6-7-10	6 Boards Left	RH	Aim between the 2nd and 3rd arrow
2-4-10	6 Boards Left	LH	Aim between the 2nd and 3rd arrow
1-3-4-6-7-9	5 Boards Left	LH	Aim between the 2nd and 3rd arrow
4-7-9	10 Boards Right	RH	Aim between the 2nd and 3rd arrow
1-2-8-10	5 Boards Right	RH	Aim between the 2nd and 3rd arrow
1-2-4-8-10	5 Boards Right	RH	Aim between the 2nd and 3rd arrow
1-2-4-6-8-10	5 Boards Left	RH	Aim between the 2nd and 3rd arrow
5-7-9	Strike Shot	RH	Aim between the 2nd and 3rd arrow
5-8-10	Strike Shot	LH	Aim between the 2nd and 3rd arrow
1-3-4-5-6-7	5 Boards Left	LH	Aim between the 2nd and 3rd arrow
6-8-10	10 Boards Left	LH	Aim between the 2nd and 3rd arrow
3-6-7	6 Boards Left	RH	Aim between the 2nd and 3rd arrow
2-7	6 Boards Right	LH	Aim between the 2nd and 3rd arrow
9-10	6 Boards Left	RH-LH	Aim between the 2nd and 3rd arrow
7-8	8 Boards Right	RH-LH	Aim between the 2nd and 3rd arrow
5-10	Strike Shot	LH	Aim between the 2nd and 3rd arrow
5-7	Strike Shot	RH	Aim between the 2nd and 3rd arrow
3-10	6 Boards Left	RH	Aim between the 2nd and 3rd arrow
3-9-10	6 Boards Left	RH	Aim between the 2nd and 3rd arrow
2-7	6 Boards Right	LH	Aim between the 2nd and 3rd arrow
2-7-8	6 Boards Right	LH	Aim between the 2nd and 3rd arrow
1-2-4-10	6 Boards Right	RH	Aim between the 2nd and 3rd arrow
1-2-4-6-10	5 Boards Right	RH	Aim between the 2nd and 3rd arrow
1-3-6-7	6 Boards Left	LH	Aim between the 2nd and 3rd arrow
1-3-4-6-7	5 Boards Left	LH	Aim between the 2nd and 3rd arrow
4-7-10	10 Boards Right	RH-LH	Aim between the 2nd and 3rd arrow
4-5	3 Boards Right	RH-LH	Aim between the 2nd and 3rd arrow
6-7-10	10 Boards Left	RH-LH	Aim between the 2nd and 3rd arrow
5-6	3 Boards Left	RH-LH	Aim between the 2nd and 3rd arrow
4-9	10 Boards Right	RH	Aim between the 2nd and 3rd arrow
1-2-4-5-6-10	5 Boards Right	RH	Aim between the 2nd and 3rd arrow
8-9	Strike Shot	RH-LH	Aim between the 2nd and 3rd arrow
1-2-4-7-10	5 Boards Right	RH	Aim between the 2nd and 3rd arrow
1-2-4-5-7-10	5 Boards Right	RH	Aim between the 2nd and 3rd arrow
1-2-4-7-8-10	5 Boards Right	RH	Aim between the 2nd and 3rd arrow
1-3-5-6-7-10	5 Boards Left	LH	Aim between the 2nd and 3rd arrow
1-3-6-7-9-10	5 Boards Left	LH	Aim between the 2nd and 3rd arrow
1-2-4-6-7-10	5 Boards Right	RH	Aim between the 2nd and 3rd arrow
1-3-6-7-10	5 Boards Left	LH	Aim between the 2nd and 3rd arrow
1-3-4-5-6-7-10	5 Boards Left	LH	Aim between the 2nd and 3rd arrow
1-3-6-7-9	5 Boards Left	LH	Aim between the 2nd and 3rd arrow
6-8	10 Boards Left	LH	Aim between the 2nd and 3rd arrow

Remember: it is better to take as many pins out with the ball rather than solely relying on pin action.
Split-making: the smallest number pin standing will take out either the adjacent or diagonal pins.

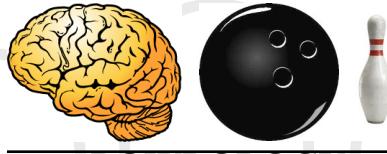
HOOKABLE SPARES / SPLITS

LH/RH	SPARE / SPLIT	ADJUSTMENT	TARGET
RH	2-4-5-7	5 boards right	Same as Strike target
LH	3-5-6-10	5 boards left	Same as Strike target
RH	1-2-4-7-8	3 boards right	Same as Strike target
LH	1-3-6-9-10	3 boards left	Same as Strike target
RH	3-6-10	5-9 boards left	Same as Strike target
LH	2-4-7	5-9 boards right	Same as Strike target
RH	3-6-9-10	5-9 boards left	Same as Strike target
LH	2-4-7-8	5-9 boards right	Same as Strike target
RH	1-2-4-9	1 board right	Same as Strike target
LH	1-3-6-8	1 board left	Same as Strike target
RH	2-4-5-8	3 boards right	Same as Strike target
LH	3-5-6-9	3 boards left	Same as Strike target
RH	1-3-8-9	2-3 boards right	Same as Strike target
LH	1-2-8-9	2-3 boards left	Same as Strike target
RH	2-4-5	3 boards right	Same as Strike target
LH	3-5-6	3 boards left	Same as Strike target
RH	2-4-10	5-6 boards right	Same as Strike target
LH	3-6-7	5-6 boards left	Same as Strike target
RH	4-5-7	3-4 boards right	Same as Strike target
LH	5-6-10	3-4 boards left	Same as Strike target
RH	4-7-9-10	9 boards right	Same as Strike target
LH	6-7-8-10	9 boards left	Same as Strike target
RH	5-7-9	3-5 boards left	Same as Strike target
LH	5-8-10	3-5 boards right	Same as Strike target
RH	1-2-4-10	5 boards right	Same as Strike target
LH	1-3-6-7	5 boards left	Same as Strike target
RH	1-3-6-9	2 boards left	Same as Strike target
LH	1-2-4-8	2 boards right	Same as Strike target
RH / LH	5-8	1-2 boards right	Same as Strike target
LH / RH	5-9	1-2 boards left	Same as Strike target

Remember: Straighter is greater, but if the bowler feels like he/she is better at making the spares or splits by hooking at them, the bowler's margin of error goes down significantly. The smallest number pin standing will take out the diagonal pins if thrown correctly.

Spare Synopsis

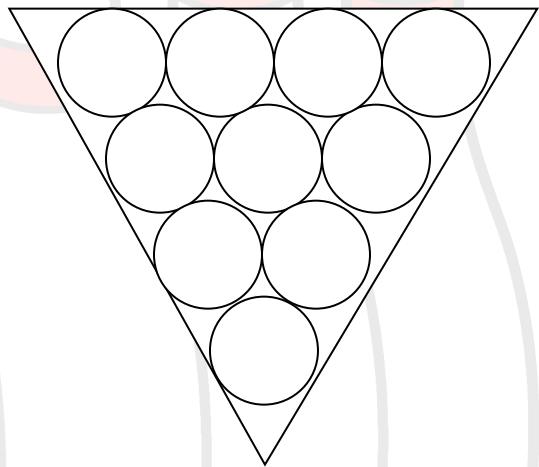
No matter how easy the lanes may seem, bowlers are going to leave spares. Even though there are over twenty USBC 900 series, bowlers are going to have to shoot spares in league or tournament play. When a bowler misses a ten pin in the first frame and strikes off the sheet, he shoots 279 instead of 290 because of missing the ten pin in the first frame. The likelihood of a bowler shooting a 900 is highly unlikely. Bowlers must keep making their spares with the current bowling ball technology. A bowler only needs to knock a pin 8 degrees to get the pin to fall. Bowlers do not need to throw a big powerful ball to knock over these spares. If a bowler is bowling in a PBA Tournament or a sport shot tournament and they hit the pocket and leave a spare, they need to capitalize on that spare by picking it up. The best equipment for making spares is a plastic ball.

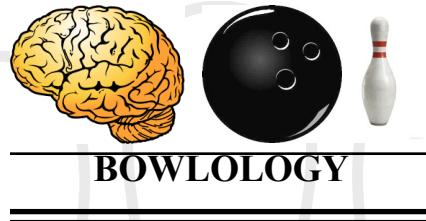


BOWLOLOGY

Hi. I am Josh Hyde, founder of Josh Hyde Bowling, joshhydebowling.com, and Josh Hyde's Bowling Newsletter. I am a Bronze Certified USBC coach. In administering this quiz to the beginning bowler, I will be able to gauge the level of his/her bowling knowledge. Answer what you know about the sport of bowling.

1. What is a strike?
2. How is a strike scored?
3. What is a spare?
4. How is a spare scored?
5. What is a gutter?
6. What is an open?
7. How is an open scored?
8. Using the diagram on the right, put the pin number in its correct location.
9. How long is a lane from foul line to the head pin?
10. How many boards on a bowling lane?
11. What is the minimum weight of a bowling pin?
12. True or False – It counts as a spare if the ball goes in the gutter, then pops out, and hits the 10 pin.
13. What is the maximum weight of a bowling ball?
14. True or False – When shooting a single pin spare across the lane (RH either the 6 or 10 pin and LH either the 4 or 7 pin), using the fourth arrow is more advantageous.
15. True or False - If any part of your body crosses the foul line (regardless of touching the line), it constitutes a 0.
16. When delivering a bowling ball, you do not cross the foul line with your foot.
17. True or False—If you throw the ball, and a pin moves or is wobbly but does not get knocked down, when the machine comes down and knocks the pin down. The pin should be stood back up by the machine.
18. You throw the ball down the lane at a full rack of pins. The 5-pin moves to the 4 spot. The machine goes to pick it up, and it drops. Where should the pin be set?
19. True or False— In your approach, the ball drops off of your hand. The ball does not go past the foul line. It does not count as a shot.
20. True or False— You roll the ball at a full rack of pins. The ball is half way down the lane and you realize that a pin is missing, and you throw a strike. It counts as a strike.
21. BONUS QUESTION: You bowl in a certified league, whatever hand you bowl with (RH or LH). You leave a spare and decide to shoot it with your opposite hand. Does the spare count?





Bowlology Exam Answer Key

Hi I am Josh Hyde, founder of Josh Hyde Bowling, joshhydebowling.com, and Josh Hyde's Bowling Newsletter. I am a Bronze Certified USBC coach. In administering this quiz to the beginning bowler, I will be able to gauge the level of his/her bowling knowledge. Answer what you know about the sport of bowling.

1. What is a strike? -All ten pins are knocked down in one ball.

2. How is a strike scored? -Ten plus next two balls.

3. What is a spare? -All ten pins are knocked down in two balls.

4. How is a spare scored? -Ten plus the next ball.

5. What is a gutter? The ball goes into one of the two channels on either side of the lane.

6. What is an open? When a bowler does not strike or spare.

7. How is an open scored? Add the pins together in that frame.

8. Using the diagram on the right, put the pin number in its correct location.

9. How long is a lane from foul line to the head pin? 60 feet

10. How many boards on a bowling lane? 39 boards

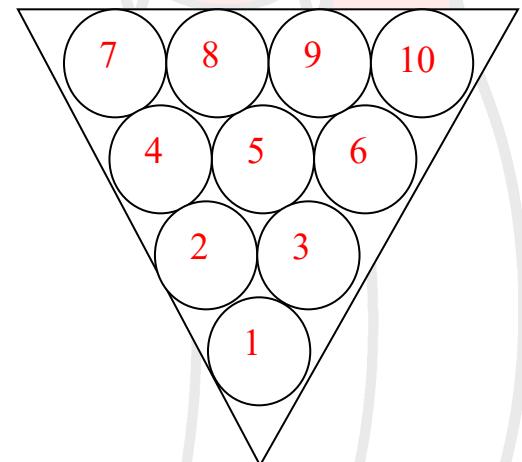
11. What is the minimum weight of a bowling pin? 3 pounds 6 ounces

12. True or False – It counts as a spare if the ball goes in the gutter, then pops out, and hits the 10 pin. **False because the ball has already went into the gutter.**

13. What is the maximum weight of a bowling ball? 16 pounds

14. True or False – When shooting a single pin spare across the lane (RH either the 6 or 10 pin and LH either the 4 or 7 pin), using the fourth arrow is more advantageous. **True, because the bowler is taking the lane condition out of play.**

15. True or False - If any part of your body crosses the foul line (regardless of touching the line), it constitutes a



down and drops the pin, the pin should be stood back up. **True**, because the machine has knocked it over.

18. You throw the ball down the lane at a full rack of pins. The 5-pin moves to the 4 spot. The machine goes to pick it up, and it drops. Where should the pin be set? **The 5 pin should be setup because the four pin has fallen but not the 5 pin.**

19. True or False. In your approach, the ball drops off of your hand. The ball does not go past the foul line. It does not count as a shot. **True** The ball has not crossed the foul line therefore you can start all over.

20. True or False. You roll the ball at a full rack of pins. The ball is half way down the lane and you realize that a pin is missing, and you throw a strike. it counts as a strike. **False** All the pins need to be on the pin deck. It does not count as a strike.

21. BONUS QUESTION: You bowl in a certified league, whatever hand you bowl with (RH or LH). You leave a spare and decide to shoot it with your opposite hand. Does the spare count? **USBC has a rule that if you are left or right handed you must throw the ball with that hand.**

100-A+

95-99-A

90-94 -A-

89-B+

85-88-B

80-84-B-

79-C+

75-78-C

70-74-C-

69-D+

65-68-D

60-64-D-59 and below-F

Bowlology Exam



BOWLLOGY

The 1st part of the Josh Hyde Bowling Instruction Manual deals with the bowling basics. The instructor will give a Bowlology quiz to where his/her students are when it comes to basic bowling knowledge, at the end of the class the students will be given another exam. This exam the students are required to pass with an 80% or higher to pass the course or 60 out of 75. If they do they can advance to the next level.

1. How many pins does the ball hit in a perfect strike?
2. In timing what does the first and second # mean?
3. Name 3 out of 7 mistakes bowlers could get into?
4. How does a right hander read the lanes?
 - A. Right to Left
 - B. Left to Right
 - C. Side to Side
5. How does a left hander read the lanes?
 - A. Right to Left
 - B. Left to Right
 - C. Side to Side
6. How does a bowler score a strike?
7. How does a bowler score a spare?
8. How does a bowler score an open?
9. True or False? If a bowler marks in the Tenth Frame they at least get one extra ball.
- 10.

9	/	x	7	2
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11. In a bowler's spare game what is the best piece of equipment they can have
 - A. Resin Reactive Ball
 - B. Particle Ball
 - C. Plastic Ball
12. A right hander leaves the Ten Pin. How many boards do they need to move and what way?
13. If a bowler leaves a 6-10 spare how many boards and what way?
14. Is it better to throw a straight or a hook at a spare why?
15. In a proper release the thumb will exit the ball first. True or False?
16. Bonus Question: What is perfect game?

Bowlology Exam



BOWLLOGY

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1. How many pins does the ball hit in a perfect strike?
4 Pins.
2. In timing what does the first and second # mean?
1st # Means ball and the second # Means foot.
3. Name 3 out of 7 mistakes bowlers could get into?
 - a.) Getting fast with the feet.
 - b.) Pushing away inconsistently leading to being early or late with the timing.
 - c.) Musceling the shot.
 - d. Allowing the swing to bump outward from the body in the early stages which causes the ball to loop.
 - e. Dropping the ball into the swing.
 - f. Holding the ball in front of the torso so that the arm must swing circuitously just to clear the body.
 - h. Failing to concentrate fully on all shots, even the seemingly easy ones.
4. How does a right hander read the lanes?
Right to Left
Left to Right
Side to Side

5. How does a left hander read the lanes?
Right to Left
Left to Right
Side to Side

6. How does a bowler score a strike?
10 plus next two balls.

7. How does a bowler score a spare?
10 plus next ball.

8. How does a bowler score an open?
Add the scores in that frame.

9. True or False? If a bowler marks in the Tenth Frame they at least get one extra ball.

True. If they strike on the first ball in the tenth frame they would receive two more balls in the tenth frame. If they spare they will receive one more shot.

- 10.

9	/		X		7	2
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First Frame-20/Second Frame-39/Third Frame-48.

11. In a bowler's spare game what is the best piece of equipment they can have

Resin Reactive Ball

Particle Ball

Plastic Ball

12. A right hander leaves the Ten Pin. How many boards do they need to move and what way?

12 boards to the left.

13. If a bowler leaves a 6-10 spare how many boards and what way?

8 boards to the left.

14. Is it better to throw a straight or a hook at a spare why?

Straight because a straight ball will take the lane conditions out of the equation. Where as if a bowler hooks at a spare and they are bowling on a PBA pattern now they are depending on the same result as if they were bowling in their league.

15. In a proper release the thumb will exit the ball first. True or False?

True. The thumb does exit the ball first in a proper release.

16. Bonus Question

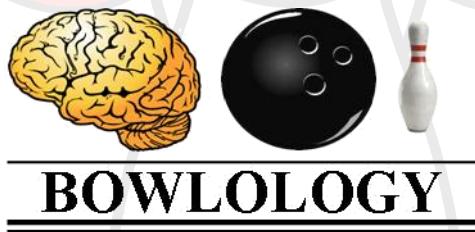
- A. What is perfect game?

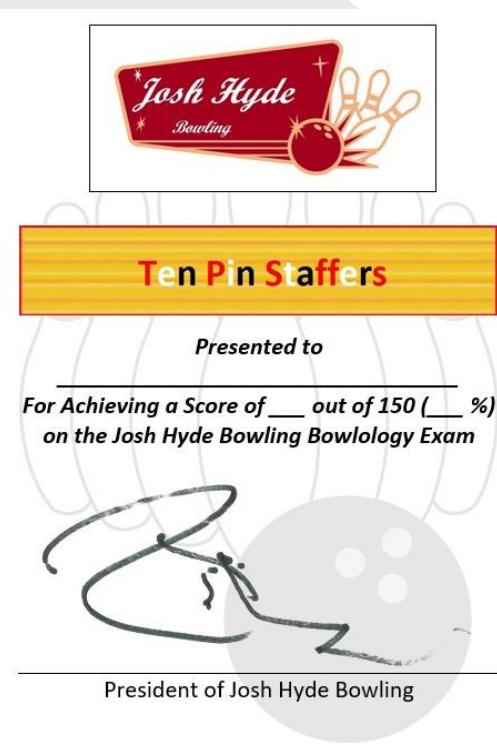
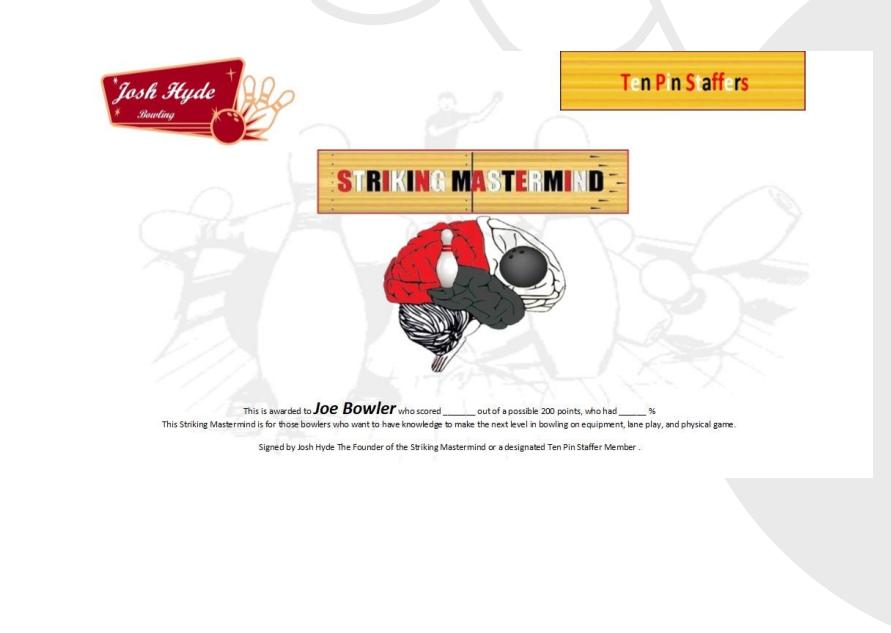
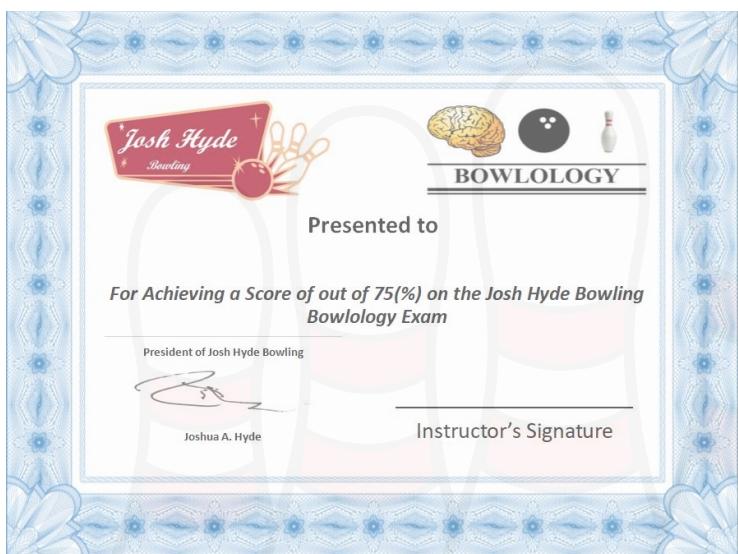
300 or 12 consecutive strikes in a single game.

Bowlology Overview

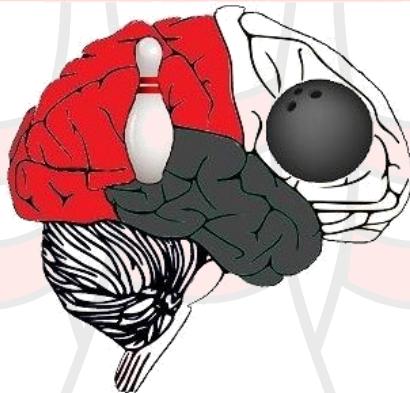
The Josh Hyde Instructional Manual for Bowlers, Pro-Shop Operators and Coaches is meant for the beginner bowler who does not know the sport of bowling. From the perfect strike to spare shooting, this is a fundamental class so that beginner bowlers can elevate their game to the next level.

The instructor will give a quiz on the first day of class to assess the initial knowledge level of the student. Then, on the final class day, the instructor will give a Bowlology exam in which the student will need to attain an 80% to advance to the Striking Mastermind class.





STRIKING MASTERMIND



Pin Carry

Pin carry is an essential part of a bowler's score. If there is no pin carry, more than likely a bowler's score is going to be lower. If a bowler can carry, however, his score will reflect that.

In the first Bowlology that I wrote, I discussed the perfect strike. There are five categories of strikes. The perfect strike is the Solid Pocket where the ball takes out the 1-3-5-9 pins. The ball will exit the pin deck left of the 9. The second type of strike is the Light Pocket where the ball hits the 3 pin and exits right of the 9 pin. This is where Billy Welu came up with the phrase "hit them thin and watch them spin." The third type of strike is the High Pocket. The ball will be more toward the head pin and exit left of the pin deck for a right handed player. The fourth type is the Brooklyn which is when the ball crosses over and hits 1-2 for a right-hander. For a left-hander, a Brooklyn strike would be when the ball crosses over and hits the 1-3.

There are three factors regarding the lane that influence pin carry: 1) pin deck, 2) kickback plate, and 3) flat gutter. The pin deck material will have the most effect on pin carry. The kickback plate has the second most effect on pin carry which is caused by the pins flying out and taking out pins that are still standing. Believe it or not, the flat gutter has the least effect on pin carry even though bowling fans see pins coming out of the gutter to take out other pins all the time. With the flat gutter it is harder for the pins to come out. The lane will tend to be higher than a flat gutter. With regular gutters, pins will more likely be able to take out other pins by bouncing out of the gutter than in a flat gutter.

Another factor that affects pin carry is lofting. A way to practice this is by putting a towel out about a foot past the foul line, and throwing the ball over the towel. This will give the bowler more loft, and he/she will be able to carry more of the corner pins.

The name of the game is pin carry. This will help bowlers not leave as many ringing ten pins or ringing seven pins for the left handed bowler. If bowlers are able to carry more, there will dramatically go up from a 2-0 game to a 240 or 250 game. This is how bowlers are able to carry more.

Ball Motion – Part 1

Bowling ball motion is important for bowlers to understand so that they recognize what their ball is doing on the lane. There are 3 phases that the ball goes through before it hits the pins.

The first phase is called the skid phase. The characteristics of this phase are: ball speed is at its highest, the revolutions are at their lowest, and friction between the ball and the lane are also at its lowest. In the second phase, which is known as the hook phase, the ball speed decreases, revolutions increase, and friction between the ball and the lane increases. The ball, in this phase, changes direction. Lastly, the final phase is called the roll phase. In the roll phase, the ball speed is at its lowest, revolutions are at their highest, and friction between the ball and the lane are at its maximum. At this point, it is rolling in a strait line therefore losing its hitting power.

There is a myth about the roll phase - that the ball rolls before it hooks. However, it has been proven through video research that the roll phase occurs after the hook phase.

Understanding ball motion will help bowlers understand what their ball is doing when it travels down the lane.

Ball Motion - Part 2

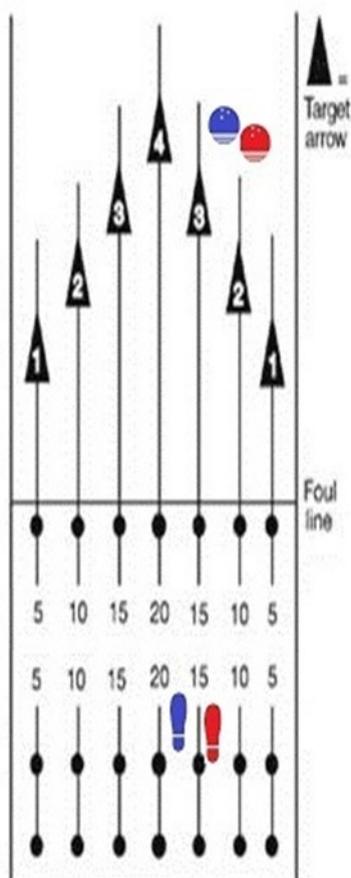
A bowler must select the right phase for the length of the pattern. These three different phases will help the bowler decide what they want to accomplish. In the early phase, the ball's motion has more hook, less skid, and more roll. This phase would be best for the Badger pattern. The next phase is called the late ball motion phase which has more skid and more hook. It has little to no roll at all. This phase would be good for the Wolf pattern. The bowler would want the ball to skid more and be more angular at the backend. The last one is called the optimal phase, being a combination of all three. This would be best used for a medium length condition where a bowler would encounter all three of these features. For more information, bowlers are encouraged to discuss ball motion with their pro-shop operator.

Adjusting

Part 1:

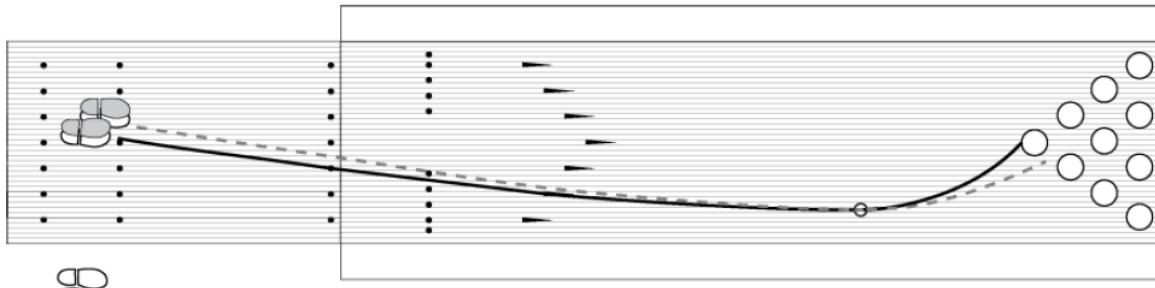
If a bowler is having trouble getting to the pocket, he or she can make a ball change or adjust their position on the lane according to the how the ball is reacting on the lane.

When the bowler says they made a 2:1, the first number represents the feet, the second number represents the ball. Often amateur bowlers forget that they can move on the lane and stick with the same ball. Adjusting can help a bowler to get back to the pocket and keep on striking and scoring.



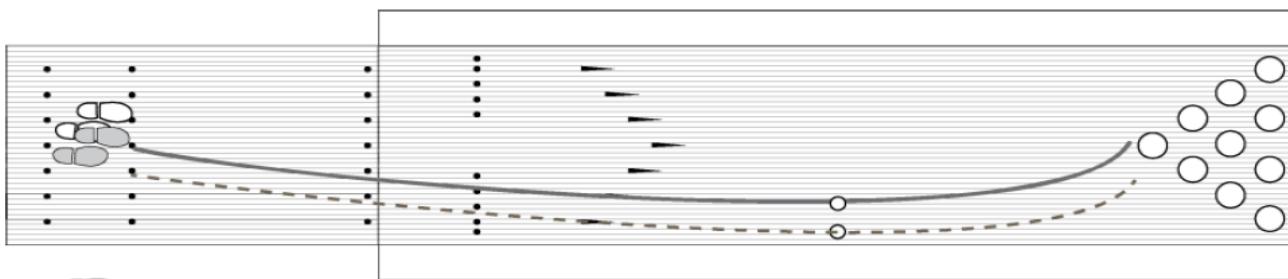
Part 2:

There are three main common adjustments that bowlers can make - 2:1 move, abstract, and parallel. The 2:1 move is where the bowler moves two with their feet and 1 with the ball – see below.

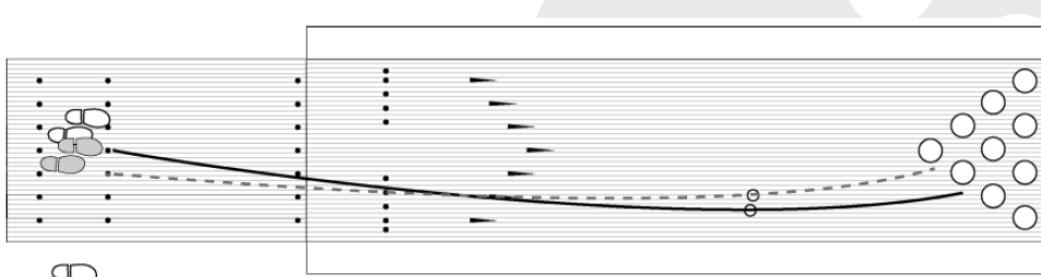


- Right-handed bowler rolls ball over 2nd Arrow and misses the 1-3 pocket to the left
- Bowler moves their feet two boards to the left and their eyes one board to the left at the arrows keeping the same breakpoint

Abstract is where a bowler moves the ball or their feet, not both.



- Right-handed bowler misses the 1-3 pocket to the left
- Bowler moves their feet and eyes (target arrows and breakpoint) equally to the right



- Right-handed bowler rolls ball over 2nd Arrow and misses the 1-3 pocket to the right
- Bowler moves their feet only to the right and rolls the ball over the same arrow, which changes the shape of the shot and the breakpoint

Parallel is moving the same amount of boards with the ball and their feet. They can get aligned to the pocket faster which enables them to keep up with the scoring pack.

Ball Layouts

Ball layouts are built around one fact: the ball will eventually roll over the “heaviest” part of its core, and in a reactive resin, that pretty much means what’s directly beneath the pin. After all, the pin is placed by the manufacturer at the point where the ball’s highest radius of gyration (RG) is located. So the closer the pin is to your initial track, the less the “heavier” part of the ball needs to move to get into an end-over-end roll, what’s sometimes called “standing up.” But when the pin is midway between the track and the positive axis point (PAP), the “heavier” part of the ball has farther to go to “stand up.” This means the core of a ball with its pin about 4” from the PAP will move more and create more track flare, which means more “fresh” ball surface is rolling over the lane. That usually produces more hook. With the pin 5-6” from the PAP, there will be less flare and less hook.

One other consideration is whether the ball is symmetrical or asymmetrical. For most bowlers, asymmetricals have a stronger reaction, so the mass bias must be considered.

For most bowlers, it comes down to this - putting the pin above the finger holes will cause the ball to delay its hooking motion. That’s called “pin-up.” Putting the pin below the fingers holes will make the ball start to hook a little earlier, but will make the hook a little smoother. This is called “pin-down.” A ball with a pin about 4” from the PAP and above the finger holes will tend to have a strong, angular hook more like a hockey stick. But putting the pin 5-6” from the PAP will decrease flair and produce a less angular hook in the shape of a banana. Putting the pin about 3” from the PAP and BELOW the finger holes will produce a strong but smooth reaction, and it won’t be as angular. Moving the pin closer to the track (but below the holes), will tame the reaction down even more. With pin-down, few drillers want to go left of the grip center line (for right-handers).

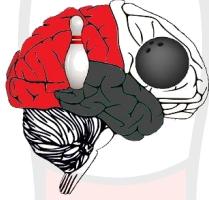
With asymmetrical balls, the mass bias position will enhance hook, or reduce it. Drilling the thumb hole into the MB mark, or putting the mass bias left of the hole, will produce a tamer reaction. Stronger reaction comes from putting the MB hole an inch or more to the right (for right-handers). Symmetrical balls don’t have a mass bias, so the layout must account for the ball’s center of gravity (CG). USBC balance rules must be followed.

If a balance hole is needed to make the ball USBC-legal, the closer to the thumb hole it is drilled, the more the strength of the layout is enhanced. A balance hole near the PAP will have little effect on reaction, but a balance hole near the pin will have a negative effect, cancelling out much of the strength of the high RG.

Ball Surfaces

Ball surface plays a big role in the game of bowling. The surface change rule states that a bowler is only allowed to change the surface of the ball before league or tournament play starts. There are three main ball surfaces - sanded, benchmark, and polished. Sanded is when the ball has the least amount friction between the ball and the lane. This surface is better when there is more oil on the lane. Benchmark is best when the lane is going through transition where the bowler may not need the ball to read the lane early. Polished is best when the lane does not have as much oil on the heads of the lane. A benchmark ball has a little more surface than a polished ball, but not as much a sanded ball would have. The local pro shop or coach can help a bowler manage and understand the bowling ball surface.

STRIKING MASTERMIND



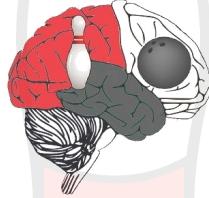
The Striking Mastermind program is for the higher average bowlers that bowl PBA Regional, local scratch tournaments, and “megabuck” tournaments. These questions are for the scratch bowlers. This quiz will enable a bowler to know more about the game and succeed in tournament play. This program is founded by the Ten-Pin Staffers of Josh Hyde Bowling.

1. What is the best way to increase ball speed?
To speed up the armswing and footwork
To slow down the arm swing and foot work
To increase the arm swing speed only
2. Why is it important to have a good fitting grip in all of your bowling balls?
To keep the hand in good condition
To ensure a clean release
To be able to switch bowling balls without worry
All of the above
3. In a five step approach to achieve neutral or textbook timing when should the ball and foot begin moving together?
First step of five
Second step of five
Third step of five
4. How can a Pro Shop operator help you improve your bowling?
Ball Selections
Proper fit
Drilling layouts
Coaching
All of the above
5. Bowlers should know what and how all of their equipment reacts in order to choose the proper ball and surface in competition
True
False
6. When bowling in a competition that is using a sport pattern, which adjustment is most prevalent to use.
Angular
Diagonal
Parallel
7. If a pattern has a high oil volume, what type of surface grit do you want on the ball?
Higher
Lower
8. Compared to a house pattern, a sport pattern typically has an oil ratio of?
4-1 or less
2-1 or more
3-1 or less
9. What phase of ball motion does the ball need to be in at the backend of the lane in order to have its best chance to strike?
 - a. Roll phase
 - b. Skid phase
 - c. Hook phase

10. What is PAP?

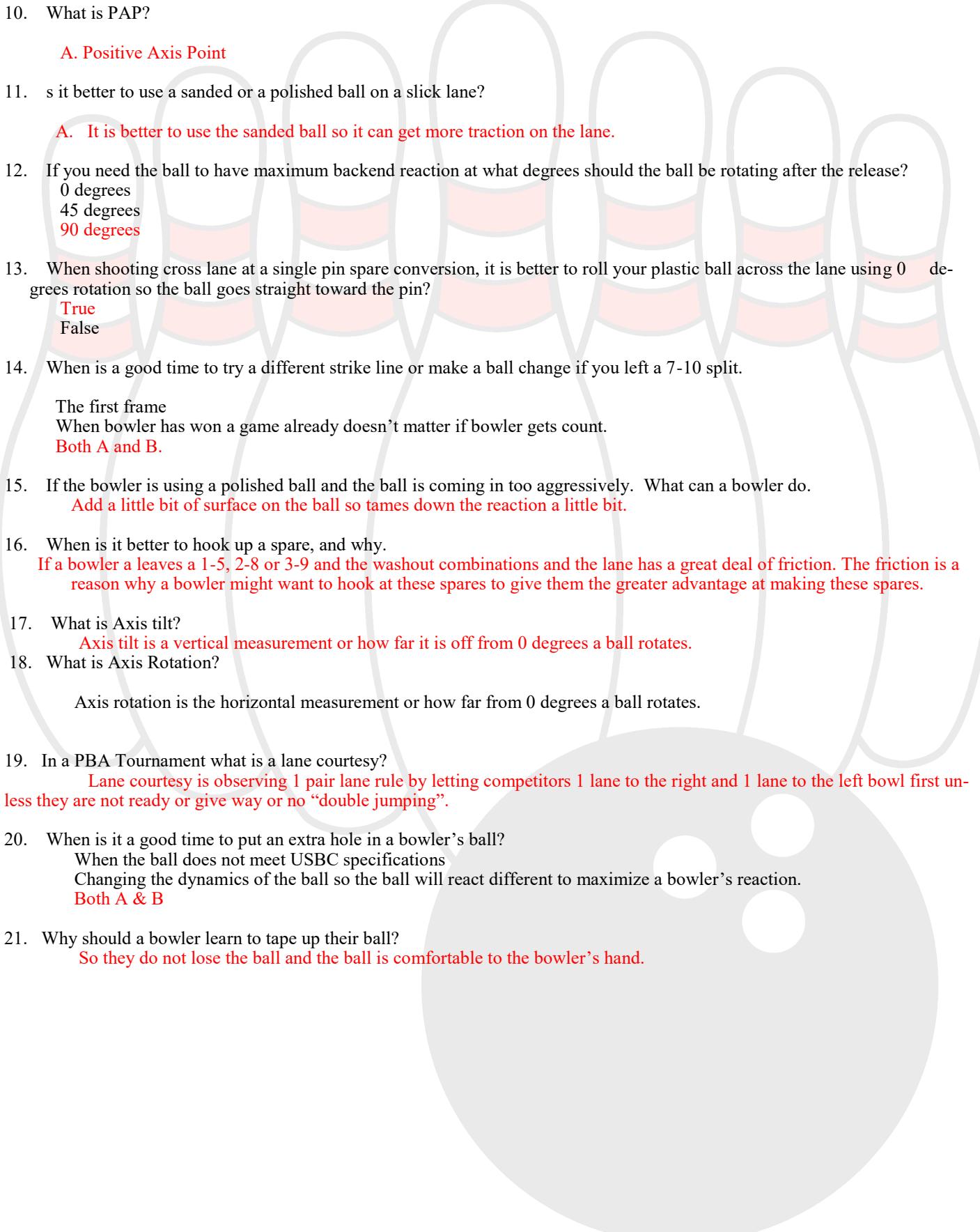
11. When a ball is skidding too far down lane and does not get into the roll phase, what adjustments could you make
 - 1 Change to a ball with a lower surface grit
 - 2 Release the ball up the back so it has more forward roll
 - 3 Decrease ball speed
 - 4 All of the above.
12. If you need the ball to have maximum backend reaction at what degrees should the ball be rotating after the release?
 - 1 0 degrees
 - 2 45 degrees
 - 3 90 degrees
13. When shooting cross lane at a single pin spare conversion, it is better to roll your plastic ball across the lane using 0 degrees rotation so the ball goes straight toward the pin?
 - 1 True
 - 2 False
14. When is a good time to try a different strike line or make a ball change if you left a 7-10 split.
 - 1 The first frame
 - 2 When bowler has won a game already doesn't matter if bowler gets count.
 - 3 Both A and B.
15. If the bowler is using a polished ball and the ball is coming in too aggressively. What can a bowler do.
16. When is it better to hook at a spare, and why.
17. The typical amateur bowler most likely changes balls after the ball does not strike. Why is that not always the best thing.
18. The typical bowler will more than likely go into a pro-shop to get the most hooking ball. Why is this not always a good idea.
19. In a PBA Tournament what is a lane courtesy?
20. When is it a good time to put an extra hole in a bowler's ball?
 - a. When the ball does not meet USBC specifications
 - b. Changing the dynamics of the ball so the ball will react different to maximize a bowler's reaction.
 - c. Both A & B
21. Why should a bowler learn to tape up their ball.

STRIKING MASTERMIND



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All of the above
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True
False
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Roll phase
Skid phase
Hook phase

- 
10. What is PAP?
 - A. Positive Axis Point
 11. Is it better to use a sanded or a polished ball on a slick lane?
 - A. It is better to use the sanded ball so it can get more traction on the lane.
 12. If you need the ball to have maximum backend reaction at what degrees should the ball be rotating after the release?
 - 0 degrees
 - 45 degrees
 - 90 degrees
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 - True
 - False
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 - The first frame
 - When bowler has won a game already doesn't matter if bowler gets count.
 - Both A and B.
 15. If the bowler is using a polished ball and the ball is coming in too aggressively. What can a bowler do.
 - Add a little bit of surface on the ball so tames down the reaction a little bit.
 16. When is it better to hook up a spare, and why.
 - If a bowler leaves a 1-5, 2-8 or 3-9 and the washout combinations and the lane has a great deal of friction. The friction is a reason why a bowler might want to hook at these spares to give them the greater advantage at making these spares.
 17. What is Axis tilt?
 - Axis tilt is a vertical measurement or how far it is off from 0 degrees a ball rotates.
 18. What is Axis Rotation?
 - Axis rotation is the horizontal measurement or how far from 0 degrees a ball rotates.
 19. In a PBA Tournament what is a lane courtesy?
 - Lane courtesy is observing 1 pair lane rule by letting competitors 1 lane to the right and 1 lane to the left bowl first unless they are not ready or give way or no "double jumping".
 20. When is it a good time to put an extra hole in a bowler's ball?
 - When the ball does not meet USBC specifications
 - Changing the dynamics of the ball so the ball will react different to maximize a bowler's reaction.
 - Both A & B
 21. Why should a bowler learn to tape up their ball?
 - So they do not lose the ball and the ball is comfortable to the bowler's hand.

Josh Hyde Bowling Presents:

Bowling Ball Layout Clinic

Ball layouts are built around one fact: the ball will eventually roll over the “heaviest” part of its core, and in a reactive resin, that pretty much means what’s directly beneath the pin. After all, the pin is placed by the manufacturer at the point where the ball’s highest radius of gyration (RG) is located. So the closer the pin is to your initial track, the less the “heavier” part of the ball needs to move to get into an end-over-end roll, what’s sometimes called “standing up.” But when the pin is midway between the track and the positive axis point (PAP), the “heavier” part of the ball has farther to go to “stand up.” This means the core of a ball with its pin about 4” from the PAP will move more and create more track flare, which means more “fresh” ball surface is rolling over the lane. That usually produces more hook. With the pin 5-6” from the PAP, there will be less flare and less hook.

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Josh Hyde Bowling Presents...

Bowling Ball Layout Clinic

Quiz:

1. Where is the heaviest part of the core located?
2. Why does the position of the pin matter in drilling?
3. If the pin is placed near the track, what should the bowler expect the ball to do?
4. If the pin is placed between the PAP and the track, what should the bowler expect the ball to do?
5. If the pin is placed above the finger holes, what should the bowler expect?
6. If the pin is placed below the finger holes, what should the bowler expect?
7. With an asymmetrical ball, what should the driller to get a stronger move when the ball starts to hook?
8. How many different layouts are possible?

Josh Hyde Bowling Presents...

Bowling Ball Layout Clinic

Answer Key

Quiz:

1. Where is the heaviest part of the core located?

A: Under the pin.

2. Why does the position of the pin matter in drilling?

A: Because the ball will eventually roll over the pin, which is where the heaviest part of the core is located, and this will influence when the ball hooks and what kind of move it will make.

3. If the pin is placed near the track, what should the bowler expect the ball to do?

A: It should flare less and have a tamer move when it starts to hook.

4. If the pin is placed between the PAP and the track, what should the bowler expect the ball to do?

A: It will make a stronger and more angular move when it starts to hook.

5. If the pin is placed above the finger holes, what should the bowler expect?

A: The ball will “go longer” before it starts to hook, and it will have a more angular move.

6. If the pin is placed below the finger holes, what should the bowler expect?

A: The ball will start to hook earlier, but the move will be smoother.

7. With an asymmetrical ball, what should the driller do to get a stronger move when the ball starts to hook?

A: Put the mass bias to the right of the thumb hole (for a right-hander) and left of the thumb hole (for a left-hander).

8. How many different layouts are possible?

A: Theoretically, an infinite number.

Ten Pin Staffers

Ten-Pin Staffer
Program

Mission Statement:

A professional advice resource contributed to by bowling industry leaders specifically for bowlers who want to improve their game to the next level.

Vision Statement:

This resource is to help scratch bowlers reach a professional level.

Ten Pin Staffer Program Overview

In July, 2015, Josh Hyde Bowling devised a program to help bowlers with their game. This program is run by Josh Hyde Bowling and the people who are in the bowling industry. The program will enable scratch bowlers to reach a higher level of their knowledge of the game. The Ten Pin Staffers had to take an exam that had a possible of 150 points. They had to have a score of 130 or better to pass and become a member of the Ten Pin Staffer team. There were short answers and essay questions. These individuals are professional bowlers and leaders in the bowling industry. This program is to help bowlers if they are having problems with their game.

These individuals make up the Ten Pin Staffer team: Teresa Ross, a USBC coaching Specialist; Dennis Bergendorf, a senior writer for *Bowler's Journal International*; John Janawicz, a Kegel Technical Pattern Specialist; Steve Klompen, Storm Marketing Executive Director; and Jeff Taylor, a Pro Shop Operator near Milwaukee. There are also two Pro Ten Pin Staffers, Parker Bohn III, who is a PBA & USBC Hall of Famer; and Mark Sullivan, who is a PBA member and winner of *Bowling this Month* Tournament. Fritz Schlemmer, who is the amateur Ten Pin Staffer.

Meet the Team

Teresa Ross - USBC Coaching Specialist

Dennis Bergendorf - Senior Writer for *Bowler's Journal International*

John Janawicz – Kegel Vice-President and Pattern Specialist

Parker Bohn III - PBA & USBC Hall of Famer, 35 PBA Titlist including 3 Majors

Mark Sullivan - PBA Member and Winner of BTM Tournament

Fritz Schlemmer - 1999 Indiana State Singles Champion

Steve Klompen - Storm Marketing Executive Director

Jeff Taylor – Pro Shop Operator

Ten Pin Staffers

1. Name the three phases of ball motion:
3. If the lanes are dry, is it better to use a sanded or a polished ball? Why?
4. Using the rule of 31, the length of the pattern is 40 feet. What is the break point?
5. What is "High RG" and "Low RG"?
6. What is "PAP"?
7. What is "VAL"?
8. What is a flat pattern?
9. Is it better to go straight or hook the ball at single pin spare?
10. What does 2 and 1 mean, in reference to a bowler's technique adjustment?

Essay:

1. A bowler is having a hard time getting to the pocket. The bowler moves right, and the ball hooks more. The bowler moves left, and the ball hooks less. What should the bowler do?
2. A bowler is 80 over and the cut is 100 assuming the cut will go up 20 more pins, with one more game to go, what score does the bowler need in order to make the cut?
3. A bowler goes into the pro shop looking to purchase a ball. Normally, bowlers want to get a ball with the most aggressive hook. How would a Pro Shop operator help make this determination?
4. A bowler is having trouble getting out of the ball. Is this due to too much forward pitch, or too much reverse pitch? How would the bowler best correct this problem?
5. The cut after 5 games was at 130 over. The cut went to 100 over. What happened to reduce the cut and why?

1. Name the three phases of ball motion:

Skid – Hook –Roll

2. If the lanes are slick, is it better to use a sanded ball or a polished ball? Why?

Sanded - Sanding the ball will give it more traction to combat the oil.

3. If the lanes are dry, is it better to use a sanded or a polished ball? Why?

Polished – A polished ball will skid further when the lanes are dry and hooking too much.

4. Using the rule of 31, the length of the pattern is 40 feet. What is the break point?

The breakpoint will be around the 9th board at the end of the oil pattern. The breakpoint is usually at the end of oil pattern, the longer the pattern is the breakpoint will be closer to the pocket and the shorter the pattern is the break point will move further away towards the outside of the lane from the pocket.

5. What is "High RG" and "Low RG"?

A High RG is a ball that has more weight towards the center of the ball which creates a smoother ball reaction and a Low RG is a ball that has more weight towards the shell or coverstock of a bowling ball which creates a sharper angle at the backend of the lane.

6. What is "PAP"?

Positive Axis Point - This is determined from a bowlers track on their bowling ball.

7. What is "VAL"?

Vertical Axis Line – I need to do more research, but it appears that the VAL may influence how quickly the ball transitions through the hook phase and how long it remains in the hook phase.

8. What is a flat pattern?

A flat pattern, also referred to as a sport pattern may have an oil ratio of either 2-1 or 3-1 across the width of the lane.

9. Is it better to go straight or hook the ball at single pin spare?

I believe it is better to go straight at single pin spares using a plastic (polyester) bowling ball, this will reduce the chance of the ball hooking away from the pin. 10 excellent, this is what bowlers really need to understand.

10. What does 2 and 1 mean, in reference to a bowler's technique adjustment?

If you are referring to timing of the physical game, the first number is the ball and the second number is the step. In this case the bowler's ball position is in two by their ball side leg and the foot work is in the first step of a 4 step approach. This is called roller (early) timing.

1. A bowler is having a hard time getting to the pocket. The bowler moves right, and the ball hooks more. The bowler moves left, and the ball hooks less. What should the bowler do?
The bowler should now have a good understanding of how and when their ball is reacting to the lane, they should be able to split the difference of the two moves they made and then make some fine tune adjustments to hit the pocket.
2. A bowler is 80 over and the cut is 100, with one more game to go, what does he need to shot in order to make the cut? Assuming this is a six game block and they have completed five games, then we can make an assumption that each game is about 20 over. So if the bowler with 100 over finishes the competition at plus 120 then the bowler that is 80 over would have to bowl at least 241 or 41 over to put them at plus 121.
3. A bowler goes into the pro shop looking to purchase a ball. Normally, bowlers want to get a ball with the most aggressive hook. How would a Pro Shop operator help make this determination?
A Pro Shop operator will generally ask the bowler many questions like what are they looking for the ball to do as well as their ball speed, and if they have a ball they currently use they will look at the bowlers track, ball type, layout, fit, and condition of the ball. They may go watch them roll a game to help determine the bowler's axis rotation. At this point they have enough information to get them into the correct ball for that bowlers particular needs.

4. A bowler is having trouble getting out of the ball. Is this due to too much forward pitch, or too much reverse pitch? How would the bowler best correct this problem?

Forward Pitch is used to help a bowler hold onto the ball and reverse pitch promotes a faster or cleaner release. Assuming the finger holes fit fine and have proper pitch we will focus on the thumb. So if the bowler is having trouble getting out of the ball first you check the thumb hole size and then check the forward/reverse pitch. If the hole size is okay then you can add some reverse pitch so the bowler will be able to get their thumb out cleaner.

5. The cut after 5 games was at 130 over. The cut went to 100 over. What happened to reduce the cut and why?
It would seem that the lanes transitioned and got a lot tougher causing the bowlers to strike less and the scores to drop during the sixth game.

Ten Pin Staffers

Ten Pin Staffers Chronicles

Hello Everyone!

Welcome to the Ten Pin Staffers Chronicles. It is my pleasure to introduce the three Ten Pin Staffers that have joined the team. Our first new team member is Teresa Ross, USBC Coaching Specialist. Teresa's husband is team USA head coach Rod Ross. Teresa scored 150 out of a possible 150 points on her Bowlology exam. She was the first to get a perfect score. Our second new Ten Pin Staffer is a senior writer for Bowler's Journal International, Dennis Bergendorf. Dennis scored 99% on his Bowlology exam. Our third addition is a PBA and USBC Hall of Famer, Parker Bohn III. Parker scored 102% on his Bowlology exam. Rounding out our newest members is Fritz Schlemmer, with a 98% Bowlology exam score.

The Ten Pin Staffer program is a resource founded by Josh Hyde Bowling. It is a tool for bowlers to improve their game. If a bowler is having difficulty in a particular area with their game, they can go to JoshHydeBowling.com and click on the Ten Pin Staffer link to view an article written by either Teresa, Dennis or Parker have written. Our basic mission and vision is to help scratch bowlers begin to think and bowl more like a professional.



Dennis Bergendorf
Bowler's Journal
International Sr. Writer



Teresa Ross
USBC Coaching Specialist



Parker Bohn III
USBC/PBA Hall of
Famer, 34 Time PBA
Tour Titlist

Ten Pin Staffer Quarterly Report:

Four people took the bowlology exam. Everyone that took the exam passed with at least a 98%, the average score was 99.75%. The first Monday in October will be the first phone conference at 6 p.m. EST. If anyone has lost the number it is **712-775-7031**, the access code is **348 109**.

Mission Statement: A professional advice resource contributed to by bowling industry leaders specifically for bowlers who want to improve their game to the next level.

Vision Statement: This resource is to help scratch bowlers reach a professional level.

Ten Pin Staffers

Ten Pin Staffers Chronicles

Hello Everyone!

Welcome to the Ten Pin Staffers Chronicles. We will discuss a new Ten Pin Staffers on the team, John Janawicz and John scored 152 out of 150. John is from Kegel who has designed patterns for tournaments around the world and even for the PBA tour. Welcome him to Ten Pin Staffer program. Our next conference call will be on December 6 @6pm EST, 5pm Central.

Here is a summary of what happened during the last conference call: Ten Pin Staffers that were on call were Dennis Bergendorf and Teresa Ross. First of all we talked about the Ten Pin Staffers exam. Both Theresa and Dennis gave it a scale of 9 on 1-10 scale. 1 being the hardest and 10 being the easiest. Plus, the team talked about the Striking Mastermind Program. Discussing what bowlers need to know about this game, in order to succeed in a sweeper, PBA Regional and or PBA tournament.

The ten Pin Staffer Program was able to publicize on Dennis Bergendorf bowling website having an article written by Ten Pin Staffers founder Josh Hyde about the program. For those of you who do not know, I have been writing a column in my newsletter about the sport of Bowling—called Bowlology. Just recently I have finished a book titled Bowlology.

Agenda for the conference call on December 7 @ 6pm est 5pm cst : the following items are attached in this email; The Striking Mastermind Logo, A sample of Striking Mastermind exam, and an article about the Ten Pin Staffers. If anyone has lost the number it is 712-775-7031, the access code is 348 109.



John Janawicz
Kegel Pattern specialist

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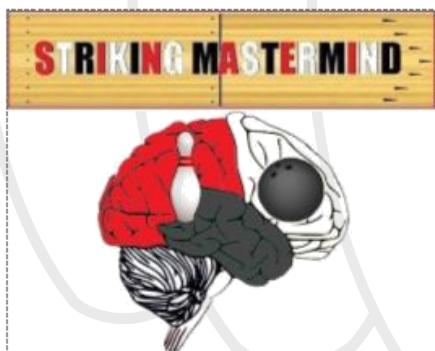
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extra

Striking Masterminds

On Wednesday April 6th, 2015 Josh Hyde Bowling and the Ten Pin Staffer Program released the Striking Mastermind. The team constitutes of two pro-bowlers Parker Bohn III & Mark Sullivan. There are also three industry professionals Dennis Bergendorf Senior Writer for Bowler's Journal International. John Janawicz is the Vice-President of Kegel and Teresa Ross USBC Coaching Specialist. Finally to round out our team is amateur Hoosier veteran Fritz Schlemmer. This exam is for higher scratch bowlers who bowl in tournaments and/or PBA Regional's. The hope for the Striking Mastermind is to increase knowledge of the higher scratch bowlers. There are questions involving adjustments, lane play, timing, ball selection, scoring, layouts, and weight holes. It is met for bowlers that want to take their game to the next level. A passing score is 150 or above out of a possible 200 points. The ten pin staffer team came up with this questions to improve bowlers technical knowledge of the sport. It is helping bowlers be able to adapt their game while they are in a high level competition of bowling. Bowlers can take this exam by going to Josh Hyde Bowling.com and then scrolling over to the ten pin staffer link and completing the 20 question test. The test will be graded and a certificate will be sent to the test taker if they passed the exam.



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Meet the Team – Industry Professionals(3) Pro-Bowlers(2), Amateur (1)



Teresa Ross



Dennis Bergendorf



John Janawicz



Parker Bohn III



Mark Sullivan



Fritz Schlemmer

Ten Pin Staffers

Ten Pin Staffers Chronicles- 2 Year Anniversary

Hello Ten Pin Staffers!

Hello, Ten-Pin Staffers it's been a long time since I have talked with the team. I know I skipped the second year anniversary back in July of this year. Better late than never. There is a number of things going on to the Josh Hyde Bowling website. I am going to revamp our Ten-Pin Staffer page and make it better than ever. It's going to be called the Josh Hyde Bowling Academy with a 28 page instructional page manual to help bowlers, coaches and pro-shop operators. In this email Ten-Pin Staffers will find a 28-page bowling instructional manual. This will be added on the Josh Hyde Bowling website in the near future. Please email me about a time where we can all talk over a conference call and I will setup a date. Thank you Dennis Bergendorf for contributing about bowling ball layouts. Again Happy Second Anniversary to the Ten-Pin Staffers. Talk with the team latter.

Sincerely:

Joshua A. Hyde
Founder of the Ten Pin Staffer Program

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Ten Pin Staffers

The Ten Pin Staffers is designed for the bowlers is designed for the top people in the bowling industry from ball motion to ball layout. These people are knowledgeable about the game and can help the typical bowler with what they need to do in order to get to the next level of the sport. If a strike instructor has a ten pin staffer course. It is recommended that the strike instructor should contact Josh Hyde by email at joshydebowling@gmail.com. The president of Josh Hyde bowling will help the strike instructor with any questions that they might have with this course. If the students pass they will be apart of the ten pin staffer program. It can even be a part of the Gold Strike Course.

—Josh Hyde, the Founder of the Ten Pin Staffer program in July 2015.



Gold Strike Course

These students know the sport of bowling inside and out. From the perfect strike, to bowling ball dynamics. If the instructor is teaching this course, he or she, has an exceptional course. It is more of a ten pin staffer course, then the rest of the courses and the Josh Hyde Bowling Ten Pin Academy. These students must present a presentation with a team or individually. It will be 40% of their score. This project that they will do is crucial in passing the gold strike course. The remaining 60% will include quizzes and tests. The last 3-5 sessions will involve the students' presentation on their projects. The strike instructor will initiate the test and quizzes that he or she deems appropriate.

Topics to discuss:

Was Pete or Dick Weber a better bowler? Why?

Is it better to have a hockey stick ball reaction or a banana reaction to the lanes? Why?

Which bowler was better, Earl Anthony or Walter Ray Williams Jr.?

Is two-handed a better route to go even though its impossible to release the ball with two hands?

Who was better Mark Roth or Marshall Holman? Why?

Tournament Patterns VS. House Patterns, which will make bowlers better?

These projects make it imperative that the students improve on the typical bowlers' knowledge. These projects amount to 20% on the actual project and 20% on the presentation. The strike instructor can give ideas on what project could be presented. The strike instructor could look at some ideas on what is on the bowling market to help bowlers improve their game and if the strike instructor thinks of something rather it be a device that a bowler can use to improve on their game or bowlers could put some data on a spreadsheet in order to help the bowlers to be able to fine tune their bowling ball arsenal. Getting the seven or ten pin out to get more carry and higher scores, so bowlers can strike more. I would advise the instructors to encourage one of the students to take a look at ball motion and come up with a paper or a device a bowler could use. The main goal of this course is to get the students to use their bowling knowledge and utilize it to help fellow bowlers.

Project Ideas:

Writing a paper on getting the corners out.

Developing a ball arsenal for bowlers and then explain what goes in it.

Develop a chart that bowlers could use from 4 to 10 different bowling balls for their arsenal.

A spec sheet for proshop operators for USBC specifications for bowling balls.

Students could do a house five game sweeper and a PBA pattern five game sweeper, analyze data and discuss how they felt the bowlers were doing on both patterns.

Father and Son Duo in PBA Hall of Fame

Both Pete and Dick Weber were great bowlers. They both are in the PBA Hall of Fame and the USBC Hall of Fame. Both have four U.S. Open titles. These two bowlers know how to get 10 pins down in one shot. This is what it takes to be a great bowler.

Dick Weber was the first superstar of the PBA. He paved the way for bowlers to make a living by throwing a bowling bowl. Weber was the first bowler to win a title in five different decades. This shows how great he really was. In his PBA career, Weber had one Player of the Year award and one High Average award. He became the first bowler to win three tournaments in-a-row. However, they were in two different seasons. Still, he won, which is more than anyone else could say.

Dick Weber was an intimidating player on the lanes. He was one of the first players to hook the ball. In his era, nobody could do this better than Weber. In the earlier years of the PBA, many PBA members would leave a lot of 5-pins—except Dick Weber, who figured out how to knock it down. Players would be envious of Weber, because it looked like Weber would not have a chance, but then he would strike. This is another area a great bowler like Weber can excel in. To become a great bowler, you must take advantage of the breaks that you receive, which is what Weber did.

Pete Weber was a bowler like his father, but he was not Dick Weber. At first, bowling fans were reluctant because of his antics on the lanes. However, he could still get the job done. He is one of the best bowlers on today's PBA tour. He is best bowler without a PBA Player of the Year to his credit. With four U.S. Open titles, no one can debate that Weber is a great bowler. He became just the third bowler to win the Triple Crown, which consists of the U.S. Open, the PBA World Championship, and the Tournament of Champions. To have all three of these titles is something to be proud of. Only six bowlers have accomplished that feat.

After he tied his father with 26 titles, during his interview Dick Weber called and congratulated him. In his quest for the Triple Crown, Pete Weber's first title toward the Triple Crown was the Tournament of Champions. To have that be the first title is hard to do. Weber can certainly strike.

Dick and Pete Weber are the best father-son combination the PBA has ever seen. These bowlers know how to strike in the hardest tournaments the PBA has to offer. Both bowlers know how to double in the tenth to win a title. This makes the Webers two of the PBA's top bowlers in history.

Dick Weber

- 1 Player of the Year Awards
- 1 High Average
- PBA Hall of Fame
- USBC Hall of Fame
- 30 Career Titles
- 4 Career Majors

Pete Weber

- 1 Rookie of the Year Awards
- 1 High Averages
- PBA Hall of Fame
- PBA50 Player of the Year
- PBA50 Rookie of the Year
- 100 Combined Career Titles
 - PBA50, PBA Tour, Regional & PBA50 Regional Tour
- USBC Hall of Fame
- 37 Career Titles
- 10 Career Majors
- 11 PBA50 Tour Titles
- 4 PBA50 Career Major Titles

The Two Greatest Bowlers of All Time

In 2008, the PBA came up with the 50 greatest bowlers in PBA history. Bowling fans could only guess between five and twenty bowlers. We knew that Earl Anthony, Walter Ray Williams, Jr., and Dick Weber were going to be at the top. What we did not know what order these greats would fall in. These three greats know how to get the job done to win a PBA title. The top two bowlers of all-time came from different eras. The sport of bowling was going through an evolution during that time, with much of that change being in equipment and lane changes. Walter Ray may have been the best at adapting his game to these changes. Here are some reasons why Earl and Walter Ray are the best two bowlers in the history of the PBA.

Anthony was the first to make \$1 million in career earnings and was the first bowler to make \$100,000 in one year on the tour. When he won a major, he won the title twice. During his career, he made the television show 15 times in two different seasons. One of his major accomplishments is that he won a title every year for 15 consecutive years. Indeed, he was definitely one of the best in professional bowling.

Williams is the first bowler to win over the \$2, \$3, and \$4 million in career earnings. Though some suspected that Williams' career was done as he entered the new millennium, in his 2002-2003 season, he set another record by earning the most money in one season and two majors—the US Open and the PBA World Championship. Williams set a tour record by converting every single-pin spare (475-for-475) in 2005-06, unheard of for any bowler. In the 2006 PBA World Championship, he tied Anthony with 41 titles. At the beginning of the 2006-07 season, he beat Pete Weber at the Japan Cup to surpass Anthony with 42 titles. Ironically, no player has had more 300 games bowled against them than Williams has. Petraglia, Hoskins, and Duke all bowled perfect games on TV against Williams.

Anthony and Williams know how to strike, and they are the best bowlers that the PBA has ever seen. Williams is the better of the two because he had to adapt to a greater variety of equipment changes in the game. Anthony had very little equipment adaptation that he had to face in his bowling career; however, he was still one of the great bowlers of his era. Both of these bowlers know how to double in the tenth to win a PBA Tour title, but Walter Ray Williams, Jr. is the greatest bowler to throw a bowling ball.

Earl Anthony

- 6 Player of the Year Awards
- 5 High Averages
- 7 PBA Senior Titles
- PBA Hall of Fame
- USBC Hall of Fame
- 43 Career Titles
- 10 Career Majors

Walter Ray Williams, Jr.

- 7 Player of the Year Awards
- 7 High Averages
- 11 PBA50 Titles
- 2 Career PBA50 Major Titles
- 8 Career Majors
- 7 Points Leaders
- 100 Combined PBA50, PBA Tour, Regional & PBA50 Regional Tour
- PBA Hall of Fame
- USBC Hall of Fame
- 47 Career Titles
- 2 PBA50 Player of the Year Honors
- 1 PBA50 Rookie of the Year Honor

Greatest Minds in Bowling—

Norm Duke



Norm Duke has one of the greatest minds in Bowling. He has won two US Opens, three PBA World Championships, one USBC Masters, and one Tournament of Champions title. In his DVD, Learning to Bowl Competitively, he talks about the sport in which bowlers can relate and discusses how bowlers can improve their game. Norm Duke can play up the gutter and hook the lane just as much as Jason Belmonte. Duke has a great insight on the game when it comes to being knowledgeable about getting to the foul line, understanding what ball motion a bowler needs to adjust, and to reading different lane conditions.

Duke has bowled a 300 on National television in 2003 against the great Walter Ray Williams Jr. He is still the youngest player to win a PBA title 1983 when he was only 18 years old. In 2008, he became the 4th player in PBA history to complete the Triple Crown and the second player to complete the Grand Slam. He made a tough 2-4-5-8 bucket spare to win the 2008 US Open. He is the only player to win Majors in one year. Duke has a great talent and is very knowledgeable about the sport of bowling.

Duke's knowledge of the game is exceptional when comes to different types of releases of the ball. Duke can get other bowlers to release the ball differently for various types of shots. Duke can master throwing his strike ball at a single pin spare just by his expertise on releasing the ball with strike ball instead of going to a plastic ball. He feels doing the low ball drill can give an advantage of shooting a six seven ten split by doing the low ball drill when he is doing the low ball drill he is seeing how the margin of error works so if he leaves a difficult split. Norm is good at manipulating his releases. Norm does not like to use a plastic ball because the ball will feel differently on his hand. Bowlers are going to leave more spares than they will strike. Bowlers must learn to make their spares if they want to win bowling's toughest tournament the U.S. Open. In Norm's DVD he talks about how crucial spare making is to be one of the best bowlers in the world.

Gold Pin Course Overview

Gold Pin Strike Instructors after instructing this course you will notice that there is a project in which I have designed. There is also a textbook for the Josh Hyde Bowling Presents: An Instructors Manual for Bowlers, Proshop Operators, and Coaches. I would encourage the Gold Pin instructors to have students make a ten to sixteen page paper on how to bowl better for fellow bowlers. Again this is for the 40% of the students' grade. The other 60% of their grade is made up of tests and quizzes. The total amount of Pins that a students need to pass is 225 out of 300. If they score a perfect 300, instructors need to contact Josh Hyde Bowling by e-mail at JoshHydeBowling.com. The student project will be a total of 120 pins because it is 40% of their grade. The other 180 pins are made up of tests and quizzes accordingly. According to the Gold Pin Strike knowledge of the game, instructors can assess what tests and quizzes the students are proficient in the sport of bowling.

Gold Pin Project Score Sheet

1. Brief description of the project.
2. In what way is it helpful for bowlers or proshop operators?
3. Was the content of the presentation understandable?
4. Did students present what bowlers could typically run into and discuss how they could improve their game within the student project?
5. Creativity of the project t. Perfect score = 120, What percentage of 120?

Glossary of Terms

- A -

ADJUST - When a bowler changes his/her starting point on the approach and/or target on the lane.

ANGULAR MOVE – An adjustment where the starting position on the approach is changed and the lane target either remains the same or is moved a different amount, resulting in a different angle.

APPROACH – 1) Portion of the lane behind the foul line used by bowlers to build momentum to deliver the ball.

2) The movement of a bowler from stance to the delivery.

AREA - The margin of error where the bowler can miss their target and still hit the pocket.

ARROWS - Targets on the lane starting about 15 feet from the foul line.

- B -

BABY SPLIT – A split where there is one pin missing between those left. For example, the 2-7, 3-10, 4-5, 5-6 splits.

BACK END – The last 15 feet of the lane before the pins.

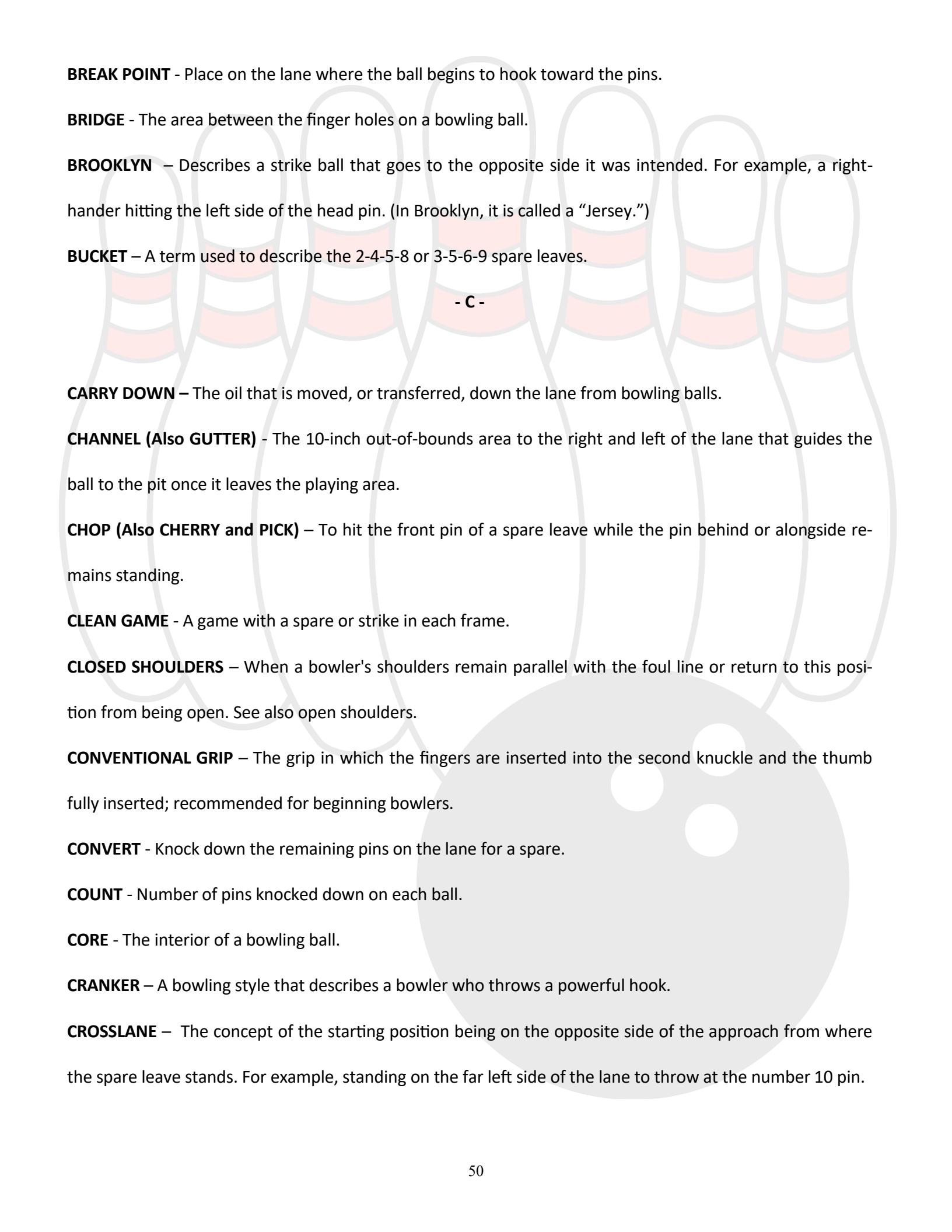
BALL – The object rolled at the pins in order to knock them down.

BALL TRACK – 1) The portion of the ball that comes in contact with the lane surface. 2) The area on the lane where the majority of balls are rolled creating a worn path.

BIG FOUR – A split resulting in the 4, 6, 7 and 10 pins still standing after the first shot

BOARD - Wooden lanes have boards approximately one-inch wide Synthetic lanes feature the same image. Bowlers use specific boards to line up their stance and as their target on various shots.

BREAKDOWN – 1) The change or deterioration of the initial oil pattern. 2) Malfunction of the pinsetter or ball return



BREAK POINT - Place on the lane where the ball begins to hook toward the pins.

BRIDGE - The area between the finger holes on a bowling ball.

BROOKLYN – Describes a strike ball that goes to the opposite side it was intended. For example, a right-hander hitting the left side of the head pin. (In Brooklyn, it is called a “Jersey.”)

BUCKET – A term used to describe the 2-4-5-8 or 3-5-6-9 spare leaves.

- C -

CARRY DOWN – The oil that is moved, or transferred, down the lane from bowling balls.

CHANNEL (Also GUTTER) - The 10-inch out-of-bounds area to the right and left of the lane that guides the ball to the pit once it leaves the playing area.

CHOP (Also CHERRY and PICK) – To hit the front pin of a spare leave while the pin behind or alongside remains standing.

CLEAN GAME - A game with a spare or strike in each frame.

CLOSED SHOULDERS – When a bowler's shoulders remain parallel with the foul line or return to this position from being open. See also open shoulders.

CONVENTIONAL GRIP – The grip in which the fingers are inserted into the second knuckle and the thumb fully inserted; recommended for beginning bowlers.

CONVERT - Knock down the remaining pins on the lane for a spare.

COUNT - Number of pins knocked down on each ball.

CORE - The interior of a bowling ball.

CRANKER – A bowling style that describes a bowler who throws a powerful hook.

CROSSLANE – The concept of the starting position being on the opposite side of the approach from where the spare leave stands. For example, standing on the far left side of the lane to throw at the number 10 pin.

DEAD BALL (Also FLAT BALL) – An ineffective ball that deflects badly when it hits the pins.

DEFLECTION - The movement of the ball after it hits the pins.

DELIVERY - The combination of a bowler's approach and release.

DOTS – 1) Imbedded in the lane just past the foul line and used by some bowlers as their target. 2) A series of dots on the approach used to assist the bowler in lining up.

DOUBLE - Two consecutive strikes.

Double Wood – The 1-5, 2-8 or 3-9.

DRIFT – A bowler's inability to finish in the same spot at the foul line.

DRY LANE - A lane that has a little amount of conditioner (oil).

DUROMETER TEST - An instrument that inserts a needle into the ball's surface to determine its hardness.

DUTCH 200 - A 200 game scored by alternating strikes and spares.

FAST EIGHT - A high pocket hit that leaves the 4-7 for a right- hander or the 6-10 for a left-hander.

FILL - Pins knocked down following a spare or two consecutive strikes in the 10th frame.

FINGERTIP GRIP – The grip in which the fingers are inserted to the first knuckle and thumb fully inserted; recommended for experienced bowlers.

FIT – Relating to the way a hand fits in the bowling ball.

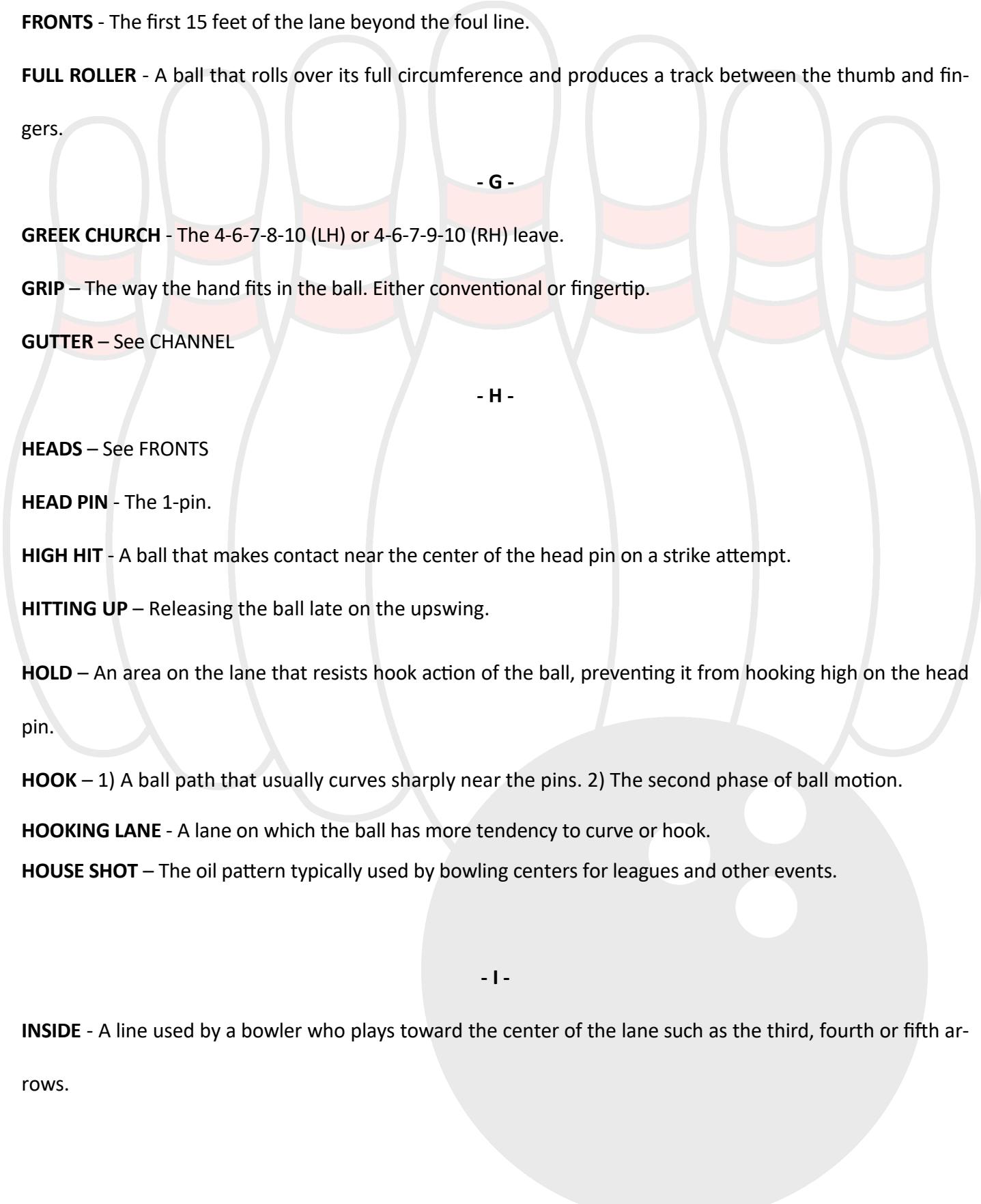
FLUSH (Also PACK) – When a ball hits the pocket solid for a strike.

FOUL - Going beyond the foul line at delivery. Results in a zero scored for that delivery.

FOUL LINE – A solid black stripe which separates the approach from the lane.

FOUNDATION FRAME - The ninth frame. The desire is to roll a strike or spare as a “foundation” for the 10th frame.

FRAME - Each game is divided into 10 frames, the first nine allowing a maximum of two shots with three shots allowed in the 10th frame.



FRONTS - The first 15 feet of the lane beyond the foul line.

FULL ROLLER - A ball that rolls over its full circumference and produces a track between the thumb and fingers.

- G -

GREEK CHURCH - The 4-6-7-8-10 (LH) or 4-6-7-9-10 (RH) leave.

GRIP – The way the hand fits in the ball. Either conventional or fingertip.

GUTTER – See CHANNEL

- H -

HEADS – See FRONTS

HEAD PIN - The 1-pin.

HIGH HIT - A ball that makes contact near the center of the head pin on a strike attempt.

HITTING UP – Releasing the ball late on the upswing.

HOLD – An area on the lane that resists hook action of the ball, preventing it from hooking high on the head pin.

HOOK – 1) A ball path that usually curves sharply near the pins. 2) The second phase of ball motion.

HOOKING LANE - A lane on which the ball has more tendency to curve or hook.

HOUSE SHOT – The oil pattern typically used by bowling centers for leagues and other events.

- I -

INSIDE - A line used by a bowler who plays toward the center of the lane such as the third, fourth or fifth arrows.

- K -

KEY PIN – In spare shooting, it is the pin that the ball must initially hit to convert the spare.

KICKBACK - Vertical division boards between lanes in the pit. On most hits, the pins bounce off the kickbacks to knock down additional pins.

- L -

LABEL - The manufacturer's marking on the ball, pin or lane.

LANE (Also ALLEY) – Playing surface made of either maple and pine wood or a synthetic surface.

LANE CONDITIONER (Also LANE OIL or LANE DRESSING) - An oil used to coat or dress the lanes, necessary to protect the lane surface. Also affects the reaction of a bowling ball.

LANE FINISH – A Urethane based product placed on wood lanes to protect the lanes surface.

LEVERAGE - Being in the proper posture position at the foul line with the knee solidly under the body to allow maximum strength in rolling the ball. 2) A type of drilling layout for a bowling ball.

LIGHT – Describes a shot that is not fully in the pocket. For a right-hander, too much to the right.

LINE – The path a bowling ball takes from release to the pins.

LOCATOR DOTS – 1) Markings imbedded in the lane just past the foul line and used by some bowlers as their target. 2) A series of dots on the approach used to assist the bowler in lining up on the approach.

LOFT – The distance beyond the foul line that the ball travels after leaving the bowler's hand to the point of impact on the lane surface.

- M -

MAPLE – Very hard wood used in the front of the lanes, approaches and bowling pins.

MARK – 1) Getting a strike or spare in a frame. 2) The spot on the lane bowlers use as their target.

MESSENGER - A pin that goes back across the lane bed to knock down additional pins.

MID-LANE (Also PINES) – The 30-foot section between the fronts and back end.

MIXER - A hit that causes the pins to bounce around.

- N -

NOSE HIT - When the ball hits the front center of the head pin.

- O -

OILY - Indicates that there is a heavy coating of conditioner on the lane, making it difficult to hook the ball.

OPEN – A frame that doesn't include a strike or spare.

OPEN SHOULDERS – When a bowler's shoulder is turned toward the ball side.

OUTSIDE – Rolling the ball starting from an area close to the channel, such as the first arrow.

OVER - In tournament play, 200 is often used for "par." If an individual is averaging over that figure, he/she is considered over for that tournament. Example: Bowler has a score of 652 for 3 games; par would be 600 so they are 52 over for the tournament.

- P -

PARTICLE BALLS – Developed in the mid-1990s, bowling balls made using high-tech manufacturing processes to insert minute pieces of silica such as glass beads in the ball's shell to increase hook potential.

PARALLEL MOVE – An adjustment where the starting position and lane target are moved the same amount and in the same direction.

PERFECT GAME - Rolling 12 consecutive strikes in one game for a score of 300.

PLASTIC BALLS - Developed during the 1950s and made of polyester.

PIN – The free-standing targets at the end of the lane. They are set in groups of 10 for each frame.

PIN ACTION – Pins that bounce or roll around the pin deck knocking down other pins.

PIN DECK - The area at the end of the lane where the pins are set.

PINFALL – The total count of pins knocked over in a given shot, series of shots or games.

PIN TRIANGLE – The arrangement of pins sitting on the pin deck.

PINES – See MID-LANE

PIT – Open area behind the pin deck where pins and balls go after leaving the back of the pin deck.

PITCH - Angle at which holes are drilled into a bowling ball.

POCKET - Where a ball hits solidly between the 1-pin and 3-pin for right-handers and the 1-pin and 2-pin for left-handers.

POLISH - A compound used to shine bowling balls in order to decrease hook potential.

PUNCH OUT - Refers to getting three strikes in the 10th frame.

- R -

REACTIVE RESIN BALLS - Developed in the 1990s, made of an advanced urethane. Reactive resin bowling balls increase hook potential.

READING THE LANES – Observation of the overall ball reaction to determine the best place to roll the ball for a strike.

RELEASE – The point at which a bowler lets go of the ball.

RELEASE POINT – The moment the bowler releases the ball with the thumb, rolling off the fingers and imparting rotation to the ball.

RESURFACE – This term refers to wood lanes, when a center cuts the worn out damaged lanes down the down to bare wood in preparation for recoating the lane finish.

REVERSE HOOK (Also BACKUP) – A ball that hooks toward the hand from which the bowler delivered it. For example, a right-hander who hooks the ball to the right.

REVOLUTIONS - Also known as "revs." The amount of rotation a bowler imparts to a bowling ball as it travels from the foul line to the pins.

ROLL OUT – A ball that stops hooking and begins to go straight.

- S -

SANDING – A process used on bowling balls to increase hook potential.

SCRATCH (Also ACTUAL) – Bowling score that does not include any handicap.

SEMI ROLLER - A ball that rolls off its center and produces a track outside of the thumb and fingers.

SET – 1) Ball holding into the pocket. 2) A series of games.

SHELL – A term referring to the outside of the bowling ball. Specifically, the material from which it was made.

SHOT – 1) A single delivery 2) Reference to where to play specific types of oil patterns.

SKID – The first phase of ball motion when the ball slides through the front portion of the lane.

SNOWPLOW - A ball that hits straight on the head pin and clears the pins for a strike.

SPAN - The distance between the thumb and finger holes on a bowling ball.

SPARE - Knocking down all 10 pins in two shots.

SPLIT - A spare leave in which the head pin is down and the remaining combination of pins have a gap between them, ranging from the 4-5 to the 7-10.

SPOT - A target on the lane surface at which the bowler aims, ranging from a dot to an arrow to a board or area.

SQUARE – A reference to having the shoulders, hips or body parallel to the foul line.

STANCE – The balanced starting position that bowlers assume before making their approach and delivery.

STONE 10 – Leaving a 10 pin on a seemingly good first ball.

STRIKE - Knocking down all 10 pins on the first ball.

STRIKING OUT – Finishing the game with a string of consecutive strikes.

STRING - A number of continuous strikes.

STROKER – A bowling style that relies on being smooth and accurate, creating only a minimal amount of hook.

SYNTHETIC LANE - A non-wood or manmade lane surface that may be placed over an existing wood lane or a pre-constructed unit placed on a foundation.

- T -

TAP – A single pin that stands on a seemingly perfect strike shot.

TARGET – A mark or area of the lane which the bowler uses to aim his or her shot.

TARGETING - Selecting a spot on the lane for the ball to roll over such as the dots, the arrows, a particular board or area. Some bowlers select the pins.

TIMING – A measurement of where the ball is in relationship to the steps during the approach.

TOPPING THE BALL - When the fingers are on top of the ball instead of behind, below or to the side upon release.

TRACK – 1) The worn or most used part of a lane 2) The part of the ball that contacts the lane surface when rolling.

TRACK FLARE – When a track migrates over a slightly different part of the ball with each revolution.

TURKEY - Three consecutive strikes.

TURN – 1) The hand motion that imparts rotation to a ball upon release. 2) A ball that hooks.

- U -

UNDER - In tournament play, 200 often is used for “par” and if an individual is averaging below that figure, he/she is considered under for that tournament. Example: Bowler has a score of 550 for three games; par would be 600 so they are 50 under for the tournament.

URETHANE – A material used in making the cover of a bowling ball.

- V -

VISUALIZATION – A mental-game technique that helps a bowler concentrate.

- W -

WASHOUT - To leave the 1-2-4-7-10, 1-2-4-10 or 1-2-10; or, for left-handers, leaving the 1-3-6-7-10, 1-3-6-7 or 1-3-7 after the first ball.

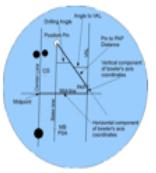
WEIGHT BLOCK – Part of the core or interior of a ball.

WOOD LANE – A lane constructed from maple and pine.



Ten Pin Staffers

STRIKING MASTERMIND



FRA.1	FRA.2	FRA.3	FRA.4	FRA.5	FRA.6	FRA.7	FRA.8	FRA.9	FRA.10
# of Students	# of Students that passed	% of Students that passed	Give them the bowlology test. Tell the student what they can. This will give them and the instructor and ideas on what to do.	The next day to discuss the perfect strike and the different types of strikes.	Discuss timing the next class. Go over the basic four step approach.	Bowlers go over the game explain how to score your spare or strike.	Next frame explain how easy the lane conditions may seem to shoot spares. Explain that a shot going hard and straight at spares will eliminate the lane conditions. It is very important that bowlers understand spare making. It can add to a bowlers average.	Have students take the bowlony exam they need to score a 60 out of 75 to pass.	The students that pass to bowl on the last day. Pair them up with a student that has passed the bowlony exam and pair them up with a student while they are bowling. They will go over what they missed.
# of Students	# of Students that passed	% of Students that passed	These students bowl in tournaments and they are higher average in bowlers. They just need a little more knowledge about adjusting layouts.	Ask them what they do under pressure and what they could improve on in their bowling game.	This course is designed to give students and edge on their competition if they want to advance to highest level of PBA.	Go over what they do not understand, a 160 out of 200 points is required to pass the striking mastermind exam. The students that do pass this course really can go through the two sections of the Josh Hyde Bowling Instructional Manual. If they pass the striking Mastermind Course. They can graduate from the Josh Hyde Ten Pin Academy. After one or two courses they can graduate from the Josh Hyde Bowling Ten Pin Academy.	Striking Mastermind Exam. The exam is not timed. They need a 160 out of 200 possible points at Josh Hyde Bowling.	Pass out the certificates and tell them they can advance their bowling knowledge by taking their ten pin staffer course or go on to the next level.	Give and outline of the ten pin staffer course. For the students who did not pass have the passing students help them.
# of Students	# of Students that passed	% of Students that passed	These students should have a fairly good amount of knowledge. They are going to understand ball motion adjusting and different elements of the game.	Discuss what students when they are at a tournament what makes them frustrated with fellow bowlers that do not understand the game like they do. If they do not understand the ten pin staffer	Have a tournament with the students that instructors have and listen to what they are discussing amongst each other with a PBA Pattern. The tournament can be a sweeper or a stepladder final.	Have them read some of the Ten Pin Staffer Chronicles. As an instructor they will continue to get a ten pin staffer chronicle. Have a session discussing the great minds of bowling.	Go over the exam for the Ten Pin Staffer Chronicles. The students will need to earn the last box will be added to the bowling ten pin staffer team.	The students will need to earn the last box will be added to the bowling ten pin staffer team.	Pass out the certificates to students that passed the exam. Call Josh Hyde Bowling at (574)306-2076. Or email me at joshhydebowling@gmail.com. Their name on the last box will be added to the bowling ten pin staffer team.
# of Students	# of Students that passed	% of Students that passed	How bowling balls that worked.	Different examples of drilling layouts. Have the students draw out a couple of bowling balls.	Homework: Have them draw out a couple more balls before exam. Give them a vocabulary list for each class.	Students should have an idea about bowling ball knowledge surfaces, layouts, and balance holes. USBC Certifications on how much Dodo Scale.	Talk about surfaces, discuss surfaces and bowling ball anatomy. The instructor also needs to point out USBC certifications, PAP.	Students need to earn thirty out of forty to pass the layouts to be certified through the Josh Hyde Bowling Pro-Shop Course.	Pass out the certificates to students that passed the exam. For the students who did not pass have the passing students pass

Josh Hyde Bowling Presents A Bowling Instructional Manual

This instructional manual is designed for bowlers, coaches and Pro-Shop Operators
Probowlerssuperfan.com launched in the Fall of 2005

Josh Hyde's Bowling Newsletter formed in June 2008

Joshydebowling.com launched in the Fall of 2010

Credentials-

PBA honorary member since 2001

IBMA member since 2006

Vise Regional staff member since 2015

Written for **Stars & Strikes, Bowlers Journal International, American Bowler**

High game of 300 House Shot (and 277 on Chameleon PBA pattern)

Three 700 series

High series: 725

USBC Bronze certified coach

Winner of 18 IBMA bowling writing awards

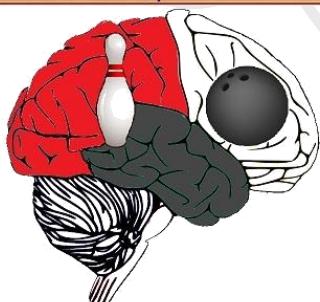
Special Recognition from IAB (The International Art of Bowling) –

for lifetime of devotion to the Sport of Bowling

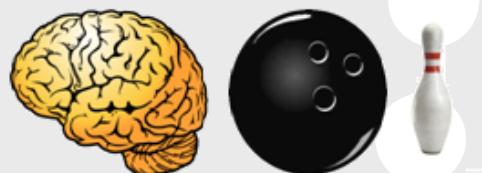
Certificate of Appreciation for outstanding service and dedication

to the Sport of Bowling (presented by Teresa Ross,
USBC Certified Silver Coach)

This instructional guide is for bowlers, coaches and pro-shop operators. There are different levels that test the bowler's knowledge - for example, a drilling layout course teach bowlers what their ball is capable of on the lanes. They can take this course to learn how to drill their own equipment, thus maximizing the efficiency of their game.



Ten Pin Staffers



BOWLOLOGY

