CANADIAN 5 PIN BOWLERS' ASSOCIATION



STANDARDS & SPECIFICATIONS MANUAL

© Canadian 5 Pin Bowlers' Association #206 – 720 Belfast Rd. Ottawa, Ontario K1G 0Z5

(613) 744-5090 Fax (613) 744-2217 e: <u>c5pba@c5pba.ca</u> web: <u>www.c5pba.ca</u>

Revised – January 2020

TABLE OF CONTENTS

	<u>PAGE</u>
Introduction	1
Lane Installers & Resurfacers	2
Automatic Pin-setters	3 - 5
Lanes & Equipment	6 - 13
Lane Markings and Designs	14 - 15
Accessory Items - Pins, Bands, Balls, Foul Line Devices, Lane Protection Devices, Automatic Scoring Devices	16 - 25
Equipment Approval & Testing Procedures	26
Metric Conversion	27 - 28
Window Decal	29
Bowling Centre Certificate	30
C5PBA Approved Equipment & Products	31
Acknowledgements	32

INTRODUCTION

In October of 1976, a committee of the bowling industry was established to:

- 1) set specifications for the 5 PIN BOWLING industry;
- 2) group the information together and publish it along with the history of 5 PIN BOWLING;
- establish testing procedures for new products that arrive on the market;
- 4) forward test results to the CANADIAN 5 PIN BOWLER'S ASSOCIATION with recommendations for this group's acceptance or rejection.

This manual is a result of the work of the committee and contains the specifications and dimensions which are currently recognized as applicable for the equipment used in 5 PIN BOWLING. These specifications are subject to change in accordance with the procedures outlined in the manual.

Further information may be obtained by contacting:



CANADIAN 5 PIN BOWLERS' ASSOCIATION #206 – 720 Belfast Rd. Ottawa, Ontario K1G 0Z5

Telephone: (613) 744-5090 Fax: (613) 744-2217

Email: office.c5pba@gmail.com

Web: www.c5pba.ca

LANE INSTALLERS & RESURFACERS

Contact Bowl Canada for a list of installers & resurfacers at:

1845 Sandstone Manor, Unit 13 Pickering, ON, L1W 3X9 (905)479-1560

email: info@bowlcanada.ca
web: www.bowlcanada.ca

AUTOMATIC PIN-SETTERS

In bowling centres using pin-setting devices, such devices must be checked annually by an accredited lane certification agent to determine if pins are being spotted correctly.

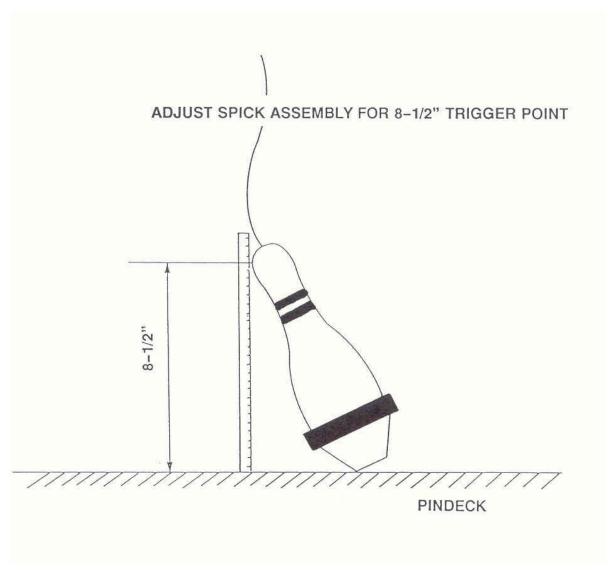
- 1. To qualify for a C5PBA test for approval, any fully automatic pin-setting device and pit area must meet these requirements:
 - a) Be designed to meet all situations normally arising in a sanctioned league or tournament.
 - b) Be constructed so that it can be installed on any C5PBA regulation lane except where approval has been obtained to modify or alter one or more of the specifications in the pit area.
 - c) It must conform with all provisions of C5PBA rules and regulations pertaining to pinfall.
 - d) The machine must be able to operate under permissible voltage fluctuations existing in the community where it is installed and in use.
 - e) All control equipment, wherever possible, should be located in a central control box, near the automatic pin-setting device. Control box(es) must be equipped with locks and must be tamper proof in order to prevent adjustments or changes made by unauthorized persons.
 - f) The pit floor at the tail plank shall measure not less than 5½" below the lane surface.
 - g) The distance from the end of the lane to the nearest point of the pit **cushion** shall be at least 25" and not more than 30". This measurement includes the width of the tail plank.
 - h) Each automatic pin-setting device shall be equipped with a curtain or pin arresting device. The curtain and cushion should be constructed so that no ball may rebound from the curtain or cushion onto the pin deck.
- 2. The following automatic pin-setters are approved:
 - a) All Professional Bowling (PBL) machines complete with shields
 - b) All Spethe machines with modifications to Schmid Systems
 - c) All models of Double Diamond machines
 - d) All models of Brunswick machines
 - e) All Strickland machines
 - f) All models of Mendes machines, complete with shields
 - g) All Leidl machines as modified by Mendes, complete with shields.
 - h) All Cameleon machines

3. SPECIFICATIONS FOR AUTOMATIC PIN-SETTERS USING STRINGS

- a) Pull string should not exceed 8 10 grams measured only with spring scale of 50 grams maximum range
- b) Pin-setter must be activated by the fall of the pin when the head of the pin has reached 8½" above the pin deck. (See Figure 1)
- c) A pin slide with a radius of 8" and not knocked down, must NOT activate the pin-setter
- d) Length of each pin string must be such that the pin can reach the cushion at all possible points and with sufficient additional string to prevent snapbacks. Minimum length required is 60" on PBS and Mendes machines.
- e) The distance from the end of the lane to the nearest point of the pit **cushion** shall be at least 25" and not more than 30". This measurement includes the width of the tail plank.
- f) Minimum measurement from flat channel to top of channel moulding joining pit board to be $1\frac{1}{2}$ ".
- g) The standard delay in activating the pin-setter is 3½ seconds measured from the time any pin reaches position in Section 3(b).
- h) Pin stabilization (in pin-up position):
 - 1. The pin must be held tight for a minimum of $\frac{1}{2}$ second in the pin-up position during the machine cycle before resetting to pin-spot.
 - 2. The pin centering unit must be, at the lowest point, 24¾" (+/- ¼") above the pin deck.
 - 3. The string tension must be at least 1.0 kilogram when measured in the pin-up position as in 3(h-1) above.
- i) In case of a tangle, the pin-setter must release the tension to allow the pins to settle toward the pin deck (not touching) before reapplying tension to provide a pull and release action.

SCHMID 5 PIN SETTING MACHINE

- a) The timing of the device must function at a minimum of 4 seconds and be so fixed that it cannot operate faster on each machine.
- b) The string or cord attached to the pin must be a minimum of 96".
- c) The string tension must not exceed ½". This must be checked prior to any shift in a sanctioned tournament. More or less tension could result in pins being set off spot.
- d) Centering device must centre pins on spot within $\frac{3}{8}$ " tolerance.



TRIGGER POINT FOR STRING PINSETTING MACHINES

FIGURE 1

LANES & EQUIPMENT

BOWLING LANE SPECIFICATIONS

Composition

A regulation bowling lane including flat channels, kickbacks, pin deck and approach may be constructed of wood, or an approved synthetic material. The edge of the pin deck, tail plank, kickbacks, flat channels and the channel mouldings may be reinforced with fibre or other synthetic materials.

Measurements (See Figure 2)

Length: The overall length of a regulation lane is 62' 10³/₁₆" measuring from foul line to pit (not

including the tail plank) with an allowable tolerance of ½".

Lanes must be 60' from foul line to the centre of the "5 Pin" spot with a tolerance of $\frac{1}{2}$ "

permitted.

The pin deck portion of the lane must be $34\frac{3}{16}$ " from the centre of the "5 Pin" spot to

the pit (not including the tail plank).

Width: The lane shall be $41\frac{1}{2}$ " in width with a tolerance of $\frac{1}{2}$ " permitted. The lane plus

channels shall not be less than 59" nor more than 61" wide.

For tenpin centres converted to 5 pin or centres with convertible machines, the

lane plus channel shall not be less than 60" nor more than 60 1/4".

Surface: Must be free of all continuous grooves. A maximum tolerance of 0.040" will be

permitted in levelness and depth depression.

Synthetic lane surfaces, as approved by the C5PBA Technical Committee, may be used providing the gap between sections of the lane surface (across the width of the lane) shall not exceed 0.040". The leading edge of one panel shall be flush or not

more than 0.015" below the trailing edge of the other panel.

For tenpin centres converted to 5 pin or centres with convertible machines, the leading edge of one panel shall be flush or not more than .040" below the

trailing edge of the previous panel.

Approach: Extending back from and exclusive of the foul line shall be a clear and level approach

of not less than 15' in length. A tolerance of 1/4" is permitted in depth of depression.

Foul Line: The foul line shall not be less than $\frac{3}{8}$ " and not more than 1" in width. It must be clearly

and distinctly marked upon or embedded in the lane.

Pin Decks: The pin deck shall be constructed entirely of hardwood except that a fibre strip,

measuring not more than $\frac{1}{2}$ " in thickness and not less than $\frac{1}{2}$ " in width, may be attached to the side of the pin deck nearest the channels and shall extend from a point opposite the "5 Pin" spot to the pit. This fibre strip must be installed vertically so that the width of the fibre exposed on the pin deck surface is not in excess of $\frac{1}{2}$ ". Pin deck

edge-boards must be rounded on a radius of not more than $\frac{5}{32}$ ". When the $\frac{5}{32}$ " radius is removed by resurfacing, such radius must be restored.

Laminated impregnated wood surface material (Permali) may be used as an alternate type of installation for pin decks. Such material is to be 3/4" in thickness. Phenolic material $\frac{1}{16}$ " thick Grade C Facing laminated to $\frac{3}{4}$ " Grade CE with an approved substrata 21/4" thick and 1/4" vapour shield back may also be used as an alternate type of installation for the pin deck.

Steel or synthetic pin decks must be flush mounted with a maximum change in levelness or depression of 0.040" from the lane bed.

Tail Planks: A tail plank, not to exceed 2" in thickness may be attached to the rear of the lane. At no time may there be more than 5" of flat playing surface, including the tail plank, in back of the "2 Pin" spots.

> The tail plank shall be constructed of hardwood except that the exposed edge on the pit side of this tail plank may be covered with a piece of fibre. The vulcanized fibre must have a radius of not less than ½" or more than ¾" at the intersection of the top edge and rear face of the tail plank.

Channels:

Channels shall be placed on each side of the lane and shall begin at the foul line and extend parallel with the lane to the pit. They may be constructed of wood or synthetic material or combination thereof.

Channels shall be 9 to 9½" wide.

(See Figures 3 & 4) From a point opposite or within 15" ahead of the "5 Pin" spot the channels must have square bottoms and gradually decline and be firmly fastened and shall not be less than $2\frac{3}{4}$ " nor more than $3\frac{1}{2}$ " below the surface of the lane. The remainder of the channel shall be concave in shape and shall be constructed of wood or a synthetic material.

Pin Spots:

(See Figure 4) The pin spots upon which the pins must be spotted shall be clearly and distinctly described (stamped or printed) or embedded in the lane and shall be 21/4" in diameter and spaced 17" or 18" from the centre of each pin spot to the centre of each adjacent pin spot.

For 18" centres, it must be 3" from the centres of the "2 Pin" spots to the pit (not including the tail plank). It shall not be less than 2½" nor more than 3" from the centre of the "2 Pin" spots, to the adjacent side of the pin deck.

For 17" centres, it must be no more than 5" from the centres of the "2Pin" spots to the pit (not including the tail plank). It shall not be less than 3½" nor more than 4" from the centre of the "2 Pin" spots, to the adjacent side of the pin deck.

The measurement from the centre of the "5 Pin" spot to a line drawn through the centres of the "2 Pin" spots must be 31\%; and 34\%; to the pit (not including the tail plank).

Shields:

Although shields are not required for lane certification, shields are required for all C5PBA events and score recognition and must meet the standards of timing beginning at the zone level. A shield acts as a barrier to block the pins from view while the automatic pin setting machine recycles. An LED lighting system can be used in lieu of the shield. Both systems must be wired directly to the brake motor. From the time a pin is hit, and the machine activates, will be a minimum of 3 seconds and a maximum of 5 seconds. For installation of both systems, please check the C5PBA certification manual.

KICKBACK PLATE

In the pit area, beyond the tail plank, kickbacks may be covered with any one of the following materials, not exceeding $\frac{3}{16}$ " in thickness:

- 1. hard vulcanized fibre
- 2. impregnated fibre glass
- 3. Iaminated phenolic (Grade "C" or "CE")
- Polyethlene (aka UHMW)
 (should be dark in colour preferably black)

PIT

For specifications pertinent to pit dimensions and construction, see Figure 5.

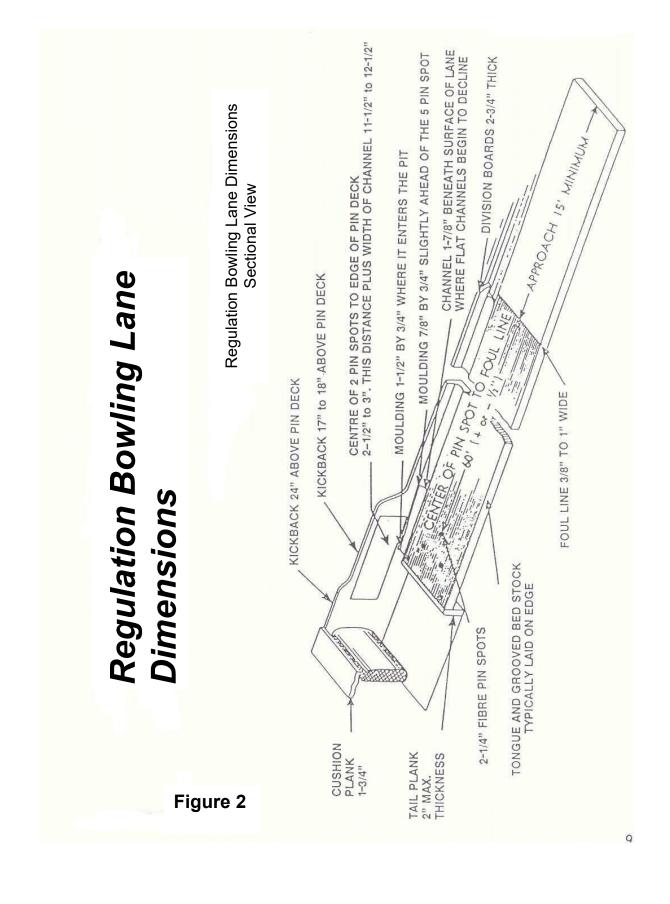
CURTAINS

Curtains shall be of a dark colour and depending on the type of pin-setting device, be located a minimum of 9" to a maximum of $23\frac{1}{2}$ " from the tail plank.

STRIKER PLATES

A flush mounted metal or synthetic plate may be placed behind the pin spots to prevent wear of the pin deck. Striker plates are not required on steel pindecks. Striker plates should be:

- 4½" x 8" behind the "5 Pin" spot
- 3½" x 8" behind the "3 Pin" spot
- Steel or synthetic pindecks should have pin spots clearly marked.



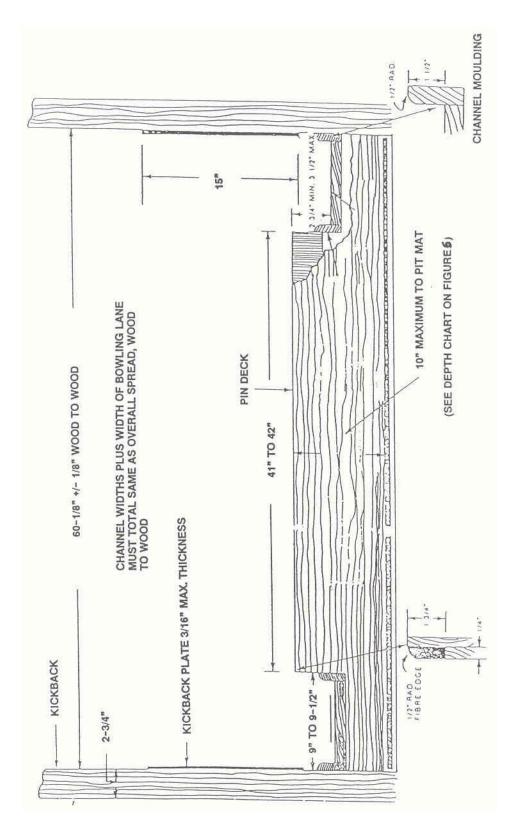
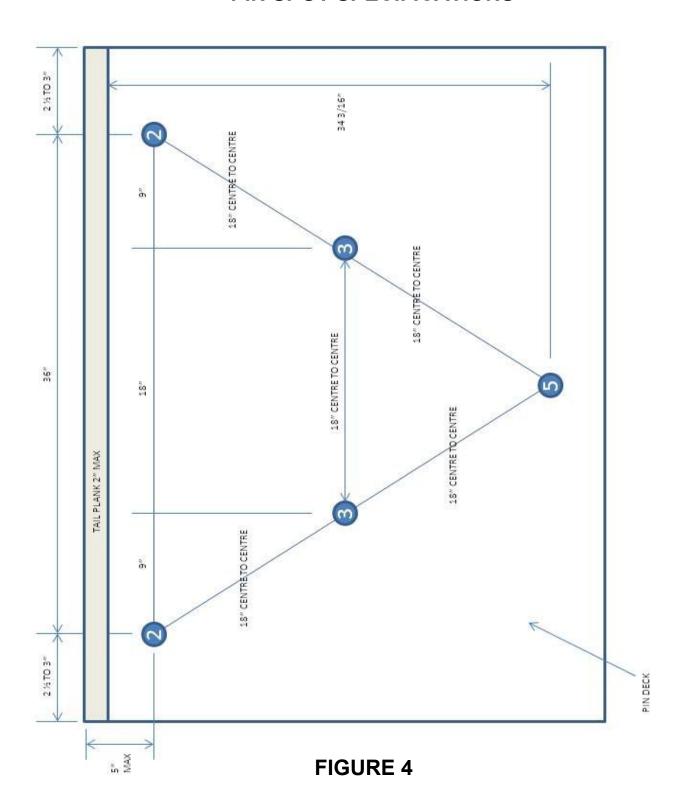


FIGURE 3

18" Centres PIN SPOT SPECIFICATIONS



17" Centres PIN SPOT SPECIFICATIONS

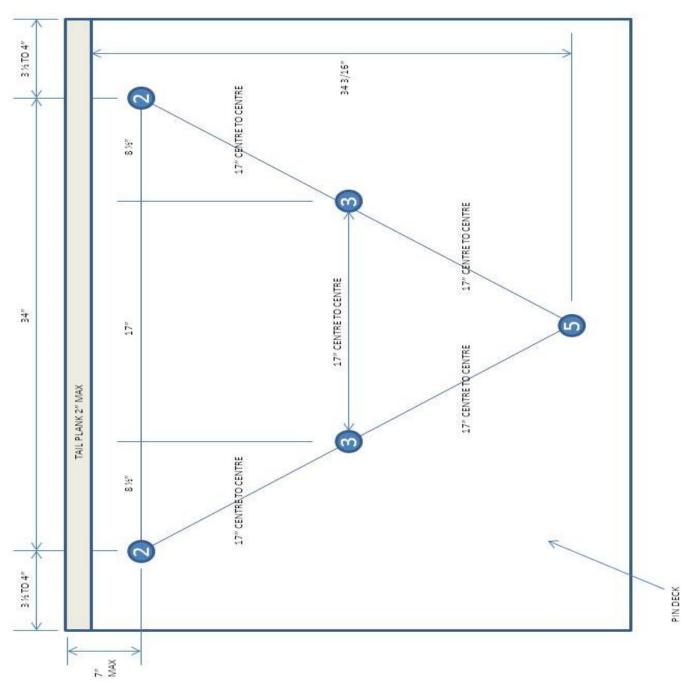
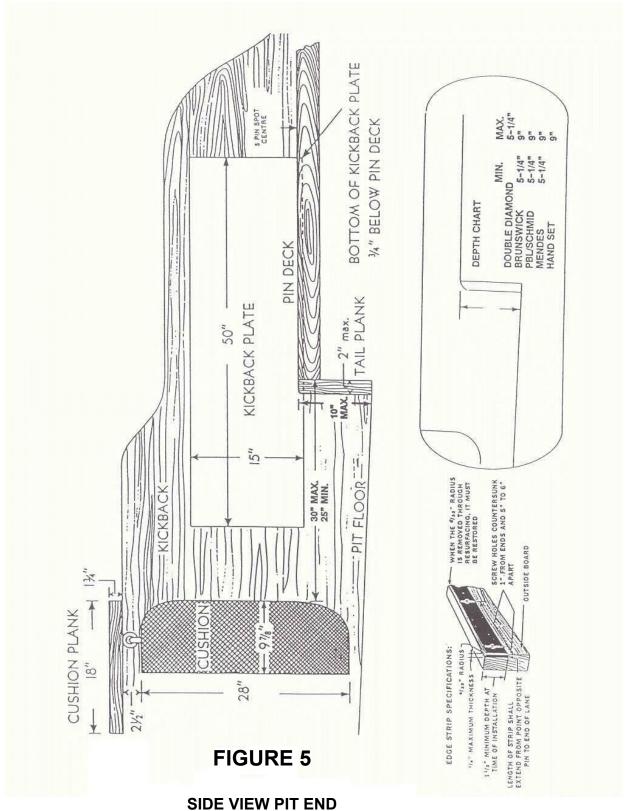


FIGURE 4



TYPICAL MANUAL & AUTOMATIC SET DIMENSIONS

LANE MARKINGS & DESIGNS

(See Figure 6)

Markings used as targets may be embedded or stamped on the lanes and approaches. The overall surface covered by each target shall not be more than 1½" in width or more than 6" in length. Each target must be equidistant from one another and set in a uniform pattern. Circular marks shall not exceed ¾" in diameter.

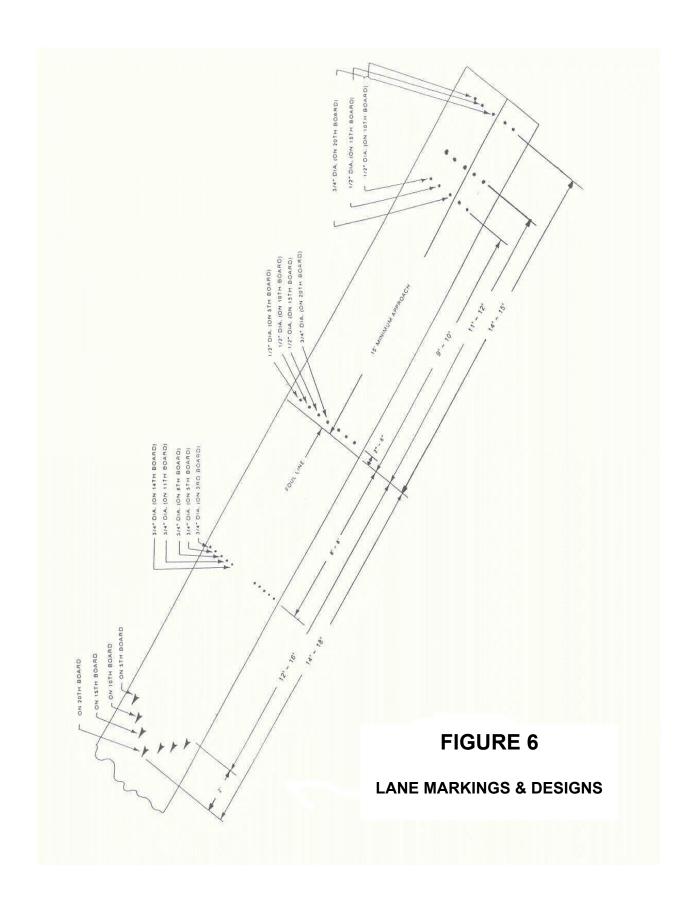
Embedded markings shall be of wood, fibre or plastic and shall be flush and level with the surface of the lanes and approaches. When markings are stamped on they shall be applied to the bare wood then covered with lacquer, shellac or similar transparent material generally used in resurfacing. All such installations in one establishment shall be uniform in design and measurement.

A maximum of 7 circular guides may be used on the approaches (parallel to the foul line) between the following points:

- 2" to 6" from the foul line
- 9' to 10' from the foul line
- 11' to 12' from the foul line
- 14' to 15' from the foul line

A maximum of 7 targets may be placed at a point between 12' to 16' beyond the foul line. These targets must be positioned equidistant from one another and set in a uniform pattern.

A maximum of 10 circular guides may be used at a point between 6' to 8' beyond the foul line.



ACCESSORY EQUIPMENT

BOWLING PIN SPECIFICATIONS

(See Figures 7 and 7A)

MATERIAL: C5PBA approved pins shall be manufactured from approved synthetics or hard,

white maple.

WEIGHT: Each pin shall weigh 2 lb., 2 oz (+/- 2 oz) without the pin band.

BALANCE: The centre of gravity of any pin shall be $4\frac{5}{8}$ " from the base of the pin. A

tolerance of $\frac{1}{8}$ " is allowable.

MOISTURE: The moisture content of any wooden bowling pin should be 6% with **CONTENT**

tolerance of +/-1%.

FINISH: Bowling pins shall be finished in a uniform white colour with the exception of

neck markings, identifying symbols or names.

DESIGN: The height of each pin shall be 12 \(^3\)\%" to 12 1/2". Pins shall conform strictly to

the specifications listed below and detailed in Figure 7. Tolerances are allowed to a maximum of $\frac{3}{64}$ ". The taper from measurement point to measurement

point should be gradual so that all lines will produce a graceful curve.

The bowling pins currently sanctioned by the C5PBA are:

Synthetic - Qubica (Mendes – Super Five), AMF -

BOWLING PIN SPECIFICATIONS

MEASUREMENT		C5PBA SPECIFICATION	_	TOLERANCES	
FROM BAS	<u>SE</u>	DIAMETER	MAXIMUM	MINIMUM	
(in inches)		(in inches)	(inches)	(inches)	
	Dobinsky				
	Insert				
			0.400	0.040	
11.50	11.625	2.063	2.109	2.016	
10.00	10.125	1.781	1.828	1.734	
8.50	8.625	1.500	1.547	1.453	
7.00	7.125	2.188	2.235	2.141	
6.00	6.125	2.969	3.016	2.922	
5.00	5.125	3.625	3.672	3.578	
4.00	4.125	4.063	4.109	4.016	
3.00	3.125	4.188	4.235	4.141	
2.00	2.125	4.000	4.047	3.953	
1.00	1.125	2.844	2.891	2.797	
0.00	.125	1.625	1.672	1.578	
	0.00	1.250	1.297	1.203	
(BASE)					

OTHER MEASUREMENTS	SP	C5PBA ECIFICATION MA	TOLERANO AXIMUM	ES MINIMUM	
Height		12.375"-12.5"	12.422"-12.	547" 12.3	328"-12.433"
Weight		2 lb. 2 oz	2 lb. 4 oz	2 lb. 0 oz	
Moisture Content (plastic coate	ed wood)	6%	7%	5%	
Centre of Gravity		4.625" -4.750:	4.750)" - 4.875"	4.500"-
4.625"					
Hole Size (Undrilled Pin)	2.188" x	0.422"	0.438"	0.406"	
Hole Size (Drilled Pin)	8.000" x	0.500"	0.516"	0.484"	
,	4.375" x	0.250"	0.266"	0.234"	

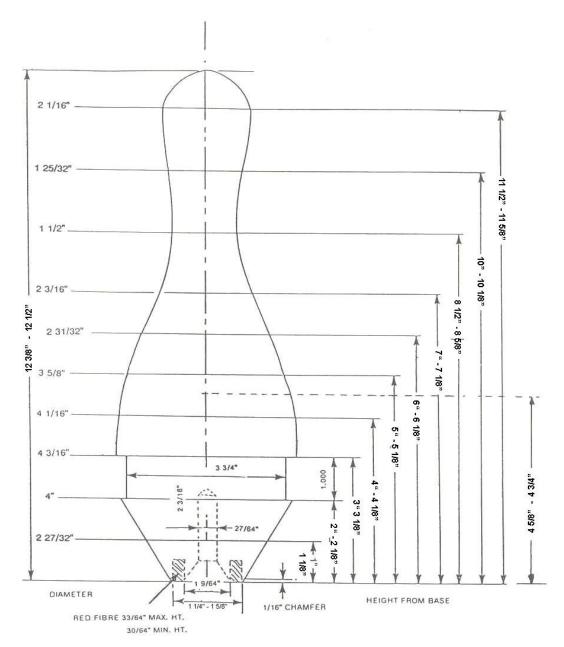


FIGURE 7

5 PIN DIMENSIONS

SPECIFICATIONS

Manufacture All pins shall be manufactured from approved

synthetic materials or hard, white maple.

Weight Each pin must not weigh less than 2 lbs. and

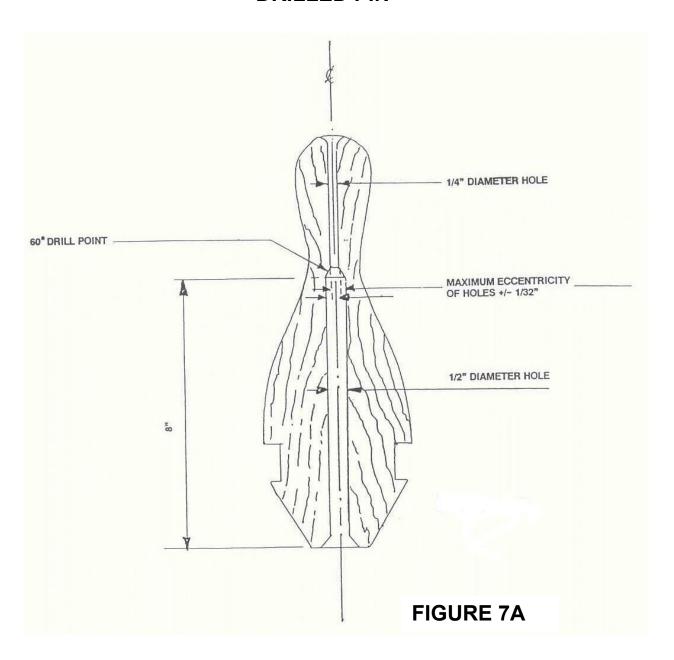
not more than 2lbs., 4 oz without the pin band.

<u>Tolerance</u> On outside dimensions +/- 3/64"

Centre of Gravity 4-5/8" - 4 3/4" above baseline +/- 1/8"

FIVE PIN DIMENSIONS AND SPECIFICIATIONS WERE APPROVED BY THE CANADIAN BOWLING CONGRESS ON AUGUST 26TH, 1966 AND ADOPTED BY THE C5PBA IN 1978.

DRILLED PIN



5 PIN BALL

(Figure 9)

MATERIAL A regulation bowling ball shall be constructed without voids in its interior, be of a non-metallic composition and shall conform to the following weight and size specifications.

The use of reflective metallic particles or flakes for decorative purposes shall be permitted providing such particles/flakes are made part of the ball at the time of manufacture and are evenly distributed in a uniform pattern.

With the exception of the approved "Thumb Hole" ball manufactured by E. Parrella Co., the surface of the bowling ball shall be free of all depressions or grooves of specific pattern, except for identification lettering/numbers and incidental chipping or marring caused by normal wear.

SIZES: Regulation bowling balls shall measure not less than $4\frac{3}{4}$ " and not more than 5" in diameter, plus or minus an allowable tolerance of $\frac{1}{32}$ ".

WEIGHT: A bowling ball shall not be less than 3 lb. 4 oz nor more than 3 lb. 12 oz in weight plus or minus an allowable tolerance of ¼ ounce.

Balls that do not conform to these weight and size specifications **SHALL NOT** receive official certification and will not be eligible for use in sanctioned competition.

Instruments for gauging balls are available to local associations and proprietors from the C5PBA or its provincial affiliates.

The 5 Pin Bowling Ball

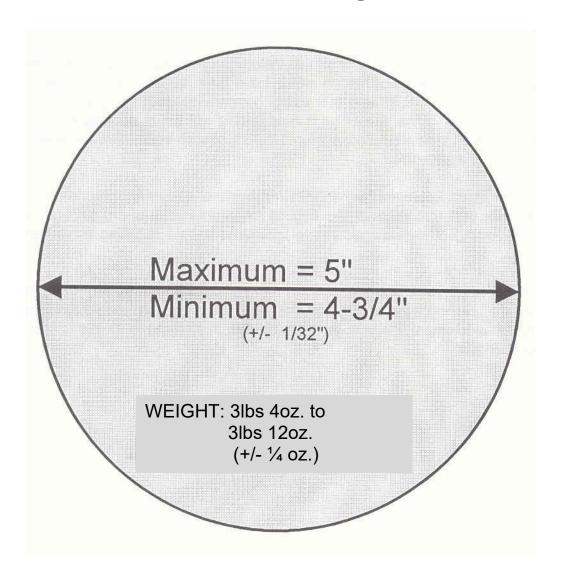


FIGURE 9

5 PIN BAND

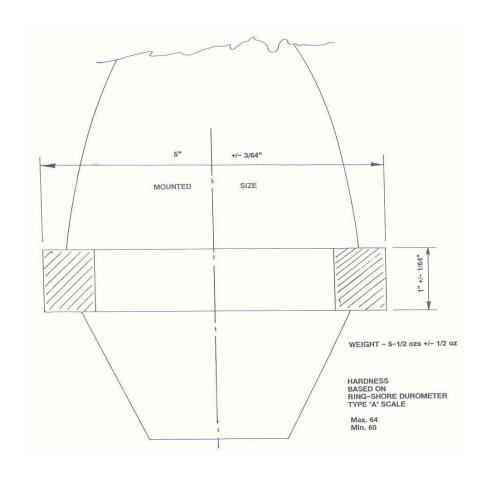
(Figure 8)

A 5 Pin band for the bowling pin shall measure 5" in outside diameter with an allowable tolerance of $\frac{3}{64}$ ". The inside diameter shall measure $\frac{3}{4}$ " in diameter ($\frac{1}{64}$ " tolerance) in order to fit snugly and securely on the pin.

The band should measure 1" in thickness ($\frac{1}{64}$ " tolerance) and shall weigh 5½ oz at the time of manufacture with an allowable tolerance of ½ oz.

Bands must be manufactured from a good quality rubber or elastomeric compound that provides consistent, fair score-ability. It is recommended that elasticity (hardness) values fall between 60 and 64 on the Shore Durometer.

FIGURE 8
THE 5 PIN BAND



FOUL DETECTION DEVICES

Each bowling establishment shall have an approved automatic foul detection device or provision to station a foul line judge at the foul lines during play.

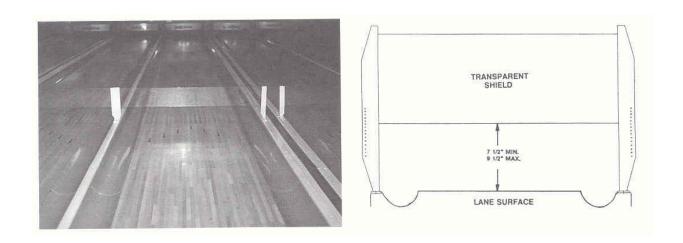
The Foul Line Detection Device:

- a) The foul detecting device must be entirely automatic.
- b) No manually operated push button, switches, levers, or other devices will be accepted.
- c) Any equipment necessary to the operation of an automatic foul detecting device must be flush with the division board if mounted therein.
- d) The device must be able to operate under permissible voltage fluctuations existing in the community where the device is installed and in use.
- e) All control equipment, wherever possible, should be located in a central control box, and must be tamper-proof in order to prevent adjustments or changes being made by unauthorized persons.
- f) The device must be equipped with a visible signal. Such light signal shall be visible to the score keeper for not less than 10 seconds and not more than 15 seconds. It is also recommended that a sound signal shall be provided of such intensity so as to be heard at the bowler settee area (enclosure?).
- g) The beam of the device shall be set not more than ½" beyond the approach side of the foul line.

LANE PROTECTION DEVICES

A lane protection device designed to discourage lofting of bowling balls onto the lane surface, may be used in sanctioned league and tournament play, providing:

- a) The approved lane protection device MUST be installed not less than 14' from the foul line.
- b) The approved lane protection device MUST be installed so that a minimum of $7\frac{1}{2}$ " and a maximum of $9\frac{1}{2}$ " is allowed between the lane surface and the bottom edge of the shield of the lane protection device.
- c) The shield portion of the lane protection device must be manufactured from a transparent material, so as to not obscure the vision of the bowler.



AUTOMATIC SCORING DEVICES

An automatic scoring device may be used in sanctioned league and tournament play providing:

- a) The device must record scores in accordance with C5PBA General Playing Rules as published in the C5PBA Rule Book.
- b) Any such devices attached to approved equipment for automatically setting pins shall not affect their operational aspects to the point of altering score-ability.
- c) Such device must detect and score off-spot pins so they will not be improperly registered as pins knocked down. An off-spot pin shall be defined as a pin that has moved, but one that an approved pin-setting device is still able to pick up and re-spot.
- d) A means of manual correction must be provided which is easily accessible to the bowler or scorekeeper to allow for correction of a score for incidents such as bowling out of turn, illegal or improper pinfall, provisional balls, late starters, dead balls, off-spot pins, and malfunctions of the device, etc.
- e) The device must accommodate the existing pattern of bowling, where bowlers and/or teams bowl on a pair of lanes, alternating after each frame, etc.
- f) Provide a printed record which can be audited frame by frame. This shall include the exact pinfall on each delivery made by a bowler.
- g) Each scoring device, must be individually presented to the C5PBA Technical Committee, for their testing and recommendations before being presented to the C5PBA Board of Directors for final approval.

EQUIPMENT APPROVAL & TESTING PROCEDURES

Disclaimer: The C5PBA approves equipment based on specified measurements outlined in this manual as well as complying to allow for play according to the Official Rules of 5 Pin Bowling. The C5PBA is not responsible to ensure durability or score-ability of any equipment.

All applications for equipment/product approval should be forwarded to the C5PBA Technical Director on or before February 15th each year, in order that testing may take place during the following season. All such applicants are responsible to pay a \$100.00 testing fee plus all other mutually approved expenses incurred by the committee in order to test their product.

Submissions of equipment/products should include a complete background of the product including manufacturing specifications which have been tested and agree with accepted specifications. A six month field test using comparative scoring figures will begin the following September. The site of such field testing will be at bowling centres that are completely neutral to the producers and/or suppliers of such equipment and shall meet with the approval of the committee

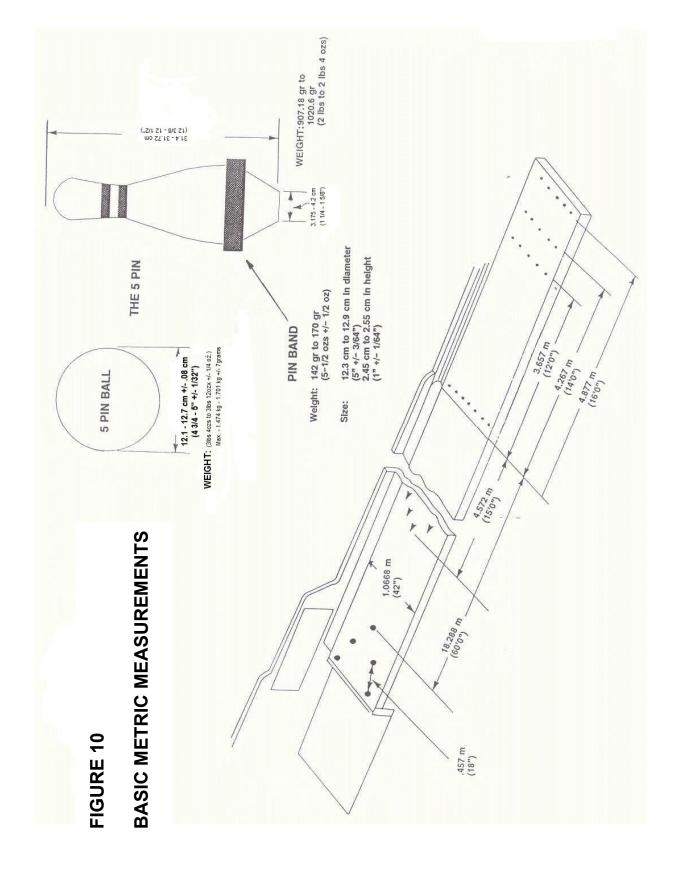
Equipment/products approved by the C5PBA for use in league and tournament play shall bear the name and trademark of the original manufacturer or distributor and be marked "C5PBA APPROVED" with the distinctive label (see below) reserved exclusively for this use.

Upon official approval being granted to the equipment/product, the manufacturer or distributor shall be notified in writing and along with it the logo depicting the official "C5PBA APPROVED" equipment insignia for use by the manufacturer or distributor on their equipment/product.



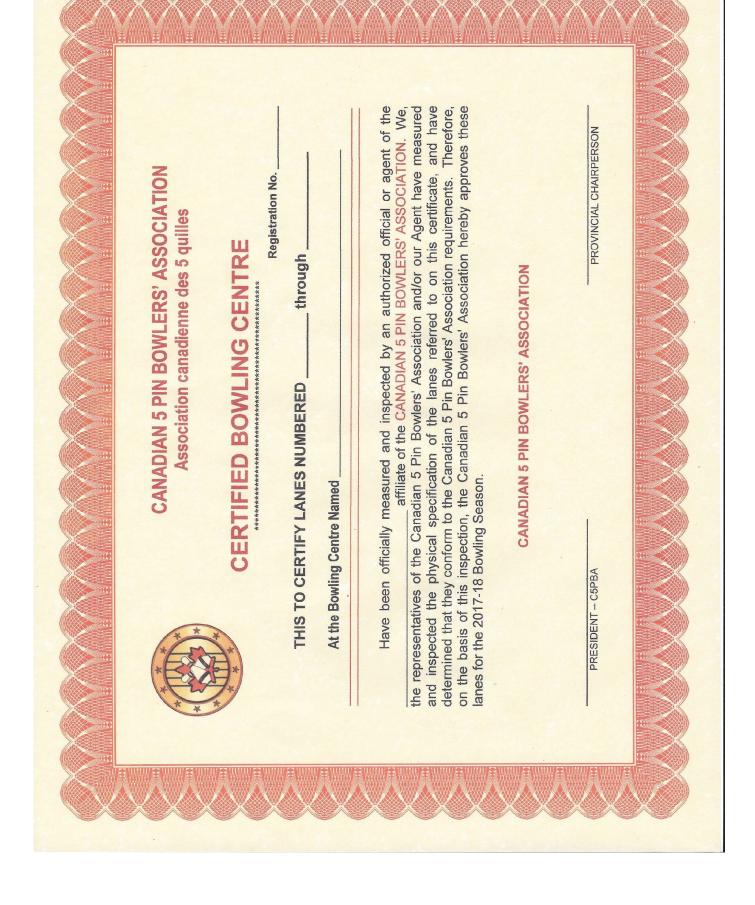
METRIC CONVERSION

Figure 10 illustrates the metric dimensions that conform to the measurements used in this manual.





C5PBA LANE CERTIFICATION WINDOW DECAL





APPENDIX B CANADIAN 5 PIN BOWLERS' ASSOCIATION APPROVED EQUIPMENT/PRODUCTS LIST (as of August, 2017)



TRADE NAME/PRODUCT

BOWLING BALLS

ABC synthetic 5 Pin Ball Aramith Bowling Ball Brunswick Tri-Color rubber 5 Pin Ball Brunswick Fireball rubber 5 Pin Ball Columbia Bud II synthetic 5 Pin Ball Comet rubber 5 Pin Ball Cyclone urethane 5 Pin Ball

◆ RU-78
Electra plastic 5 Pin Ball
High Skore rubber 5 Pin Ball

Olympic synthetic 5 Pin Ball Paramount synthetic 5 Pin Ball

Splash8 Ball

PBS rubber 5 Pin Ball Phipps "Softroll" Ball Phipps "Hardroll" Ball

AMF XS

AMF Ninja

Viper

Starline plastic 5 Pin Ball

Sparkle

• Glo

Paramount Thumb Hole Ball

APPROVED DELIVERY DEVICES

The Extender Bowling Q

MANUFACTURER

APPROVED BOWLING SUPPLIES

E. Parrella Company Inc. - Medway, Mass.
Saluc SA - Belgium
Brunswick Int'l Canada Ltd. - Mississauga, Ont.
Brunswick Int'l. Canada Ltd. - Mississauga, Ont.
Columbia 300, Inc. - San Antonio, Texas
E. Parrella Company Inc. - Medway, Mass.
E. Parrella Company Inc. - Medway, Mass.

E. Parrella Company Inc. - Medway, Mass. Cupolo Sports, Niagara Falls, Ontario E. Parrella Company Inc. - Medway, Mass. E. Parrella Company Inc. - Medway, Mass.

Professional Bowling Limited - Milton, Ont. Saluc SA – Belgium E. Parrella Company Inc. - Medway, Mass.

E. Parrella Company Inc. - Medway, Mass.

E. Parrella Company Inc. - Medway Mass.

Innovations Plus - Huntsville, ON

APPROVED BOWLING CENTRE EQUIPMENT

TRADE NAME/PRODUCT

MANUFACTURER

AUTOMATIC PINSETTERS

P.B.L. String Pinsetters
Spethe-Schmid String Pinsetters
Double Diamond Pinsetters
Brunswick Pinsetters
Strickland Pinsetters
Leidl String Pinsetters

Mendes String Pinsetters
Cameleon Pinsetter

BOWLING PINS P.B.S. Fivepin

C.S.B. Fivepin Target Bowling Pin Super Five Pin

PIN BANDS

All bands on the market prior to 1996 (grandfathered)

Urethane band Everstrike

SYNTHETIC LANE SURFACES

Futura Armor Plate 3000 Systems 2000 DBA Duralane AMF HPL-9000

LANE PROTECTION DEVICES

ALTERNATE PIN DECK SURFACES

Lane Guard

Futura Steel Pin Deck

Professional Bowling Limited - Milton, Ont. Professional Bowling Limited - Milton, Ont. Phillips Electronics - Scarborough, Ont. Brunswick Int'l. of Canada Ltd. - Oakville, Ont.

Strickland - St. Catharines, Ont.

Thomson-Leidl Recreation Inc - Chatsworth, Ont. Mendes Inc. (Qubica) - Quebec City, Que.

Striker Bowling Solutions (Brunswick Int) Oakville, ON

Professional Bowling Limited - Milton, Ont. Canada Spool & Bobbin - Walkerton, Ont.

Durapin Inc. - Pawtucket, R.I. Mendes Inc. - Quebec City, Que.

E. Parrella Company Inc. - Medway, Mass.

Phipps Bowling Sales

Mendes Inc. - Quebec City, Que.

Brunswick Int'l Canada Ltd - Mississauga, Ont. Brunswick Int'l Canada Ltd - Mississauga, Ont. DBA Products Ltd. - Scarborough, Ont. AMF Incorporated, Richmond VA

Ace Bowling Development Ltd. - London, Ont.

Mendes Inc., Quebec City, Que.

ACKNOWLEDGEMENTS

Many thanks to ...

- To the National Technical Committee of the CANADIAN 5 PIN BOWLERS' ASSOCIATION and specifically to Mr. Wally Knapp of St. Thomas, Ontario, for compiling the information and checking the details.
- To American Bowling Congress/Women's International Bowling Congress for their experience and assistance in providing detailed technical information, access to equipment and diagrams.
- To Sport Canada for financial assistance in translation of the manual.
- To Bert Garside and the Ontario 5 Pin Bowlers' Association for supplying the original manual and the detailed work for that manual.
- To Bowl Canada for their support of the certification process.
- To Walkley Bowling Centre, Ottawa for the use of their facilities and equipment during the photography sessions.