



Switch[®]
Bowling with style



Alain Winthralter
CEO

Switch Entertainment S.A. is a group of companies formed by individuals who pride themselves in their duties. Excellence and differentiation are embedded in our DNA. Throughout the years we have learned that listening to our customers and respecting the vast number of cultures around the globe are essential to our success. Clients become partners and partners become friends. We have surrounded ourselves with the best in their particular field, from designer to engineer, from procurement to marketing, from sales and distribution to service. All of us understand the values of life and all of us are dedicated to making the partnership a success.



Mario Silvestri
Shareholder

Throughout my career, I have invested in many different ventures. But none of them have been as exciting and rewarding as Switch®. Talking with the specialists within Switch®, one immediately recognises their enthusiasm in ensuring that the customer is respected and listened to. During the history of Switch®, I am pleased to note that the company and its partners have already created a success story. The accumulated experience coupled with youth and expertise is the winning formula that a modern company needs to compete in a global environment.

Switch®

A whole new environment
of style, sport and speed

There's a new idea behind Switch®
bowling. It's based on speed,
sport and style. The best-known name
in Italian industrial design and the most
advanced bowling technology have come
together to create a whole new, exciting
environment for entertainment...
from seating and ball racks to lanes,
lighting and electronic scoring.
It is an eye-opening environment,
designed to bring more quality and more
performance to bowling.
There's a new world of style, speed and
sport waiting for you. It pays to discover it.
Bowl with style. Bowl with Switch®.

Switch®

How years of experience have changed every component of bowling

An understanding of consumer trends and the importance of the physical configuration of equipment

Bowling has moved into the 21st century with more force than a speeding ball. The force propelling it is a company called Switch®, created by people with years of experience in both bowling and leisure. The company's wide-ranging know-how begins with original and practical design and state-of-the-art manufacturing and continues right through to marketing, sales and installation... including customer service and operations worldwide.

What's making Switch® click? Its well-known partners: Pininfarina, Toshiba and Abet Laminati. They are all highly respected world leaders in their fields, with totally new ideas that are making bowling more fun, more exciting and more welcoming to new enthusiasts.

Their visionary concepts are opening one of the fastest growing leisure activity markets even further. In fact, they are so passionate about Switch®, they have lent their brand names to the equipment they designed and created.

Pininfarina, renowned for its Ferrari and Maserati automotive design and a wide range of industrial design concepts, works closely with Switch® to create bowling facilities that not only look different, but are different.

Pininfarina designers are well known for their understanding of consumer trends and the importance of the physical configuration of equipment... key to the whole philosophy and spirit of Switch®.

The innovative line of products brings new standards of functionality and design to the bowling environment, giving flexibility to the layout possibilities and an excellent balance of style and performance to the user.

Paolo Pininfarina, C.E.O. of Pininfarina Extra:

"Pininfarina has always paid close attention to designing sports equipment. We enthusiastically support this project in the bowling sector, one of the most enjoyable sport games."

www.pininfarinaextra.it

Certifications and memberships:

The Switch® Capital Equipment package is delivered with a European Certificate of Origin. The equipment is also CE approved, GS-certified by the German Labour Safety Organisation and USBC approved. In addition, Switch® has FIRA/UL certification, a fire safety certification for plastic and polyurethane objects.

Switch® is also a member of the EBPA and the ICSC.



Switch[®] 2,
the scoring
system
revolution
is here

The Switch[®] Front Desk, with its refined, high-tech 'operator main screen', will be warmly welcomed by bowling centre operators. The control panel, which operators will be using for hours each day, has a clean and sophisticated look. Since each screen functions independently and has a unique size and on-screen position, it is also easy to use.



Custom preferences

All custom preferences can be easily added, modified and saved with the Switch® preference screen. The people behind Switch® have learned from 30 years of worldwide experience that every centre must be configured in a unique way. It has been a goal at Switch® to make this easy-to-use system available. Now, navigating through many features can be done with little to no effort.

At Switch®, we put experience to work.

Payment methods that pay

Switch® offers a wide range of payment methods, such as pay per game, per hour, post-pay or pre-pay mode. The numerous rate possibilities, whether or not they are discounted, are all easily configured. This is tied-in with the unique bowler's archive, since every bowler entered in the archive is automatically detected by the system. The system will also allocate a pre-defined rate to the bowler. Also included is a loyalty programme, defined by the number of games bowled. The Switch® system automatically keeps track of all activity... a great marketing tool.

Food for thought

Food and beverage sales are easily handled by the Switch® system, whether selling items to lane accounts or over the counter. Bowlers can even order specific food and drinks directly from the bowler console. All product images can be imported from any computer or even captured by the main desk webcam. This handy Switch® system will certainly help raise in-house sales. Profit from Switch®.



Handy 'user groups'

To operate the system, each operator must 'check in'. There are two ways to do this, either by a very fast swipe of the operator's magnetic card or entry of a personal password. The card gives each operator associated to their photo a number of security levels - set by the owner or manager - at which they are allowed to operate. To facilitate this procedure, the Switch® system generates 'user groups', placing operators with similar security levels into groups, such as manager, assistant, cashier and mechanic.

Unique bowler's archive

The Switch® bowler's archive is a one of a kind feature. In just a few seconds, bowling centres can capture photos and complete bowlers' details. The system automatically recognises bowlers each time they bowl and logs all their activities; money spent, games bowled, scores and averages. The Switch® bowler's archive provides the highest degree of detail, even storing splits left and picked up and whether spares are closed or not.



A booking genius

Easy-to-use, practically paper-free Switch® advanced booking, using colour-coded bookings, shows at a glance which lanes and times have been booked. Operators can take credit card deposits over the phone and the Switch® scoring system will apply the deposit to the account when needed. Operators can also track and trace every activity, book multiple lanes for groups and pre-enter names to save time when they are due to play. A great time saver.



Name your theme

Switch® has an impressive number of on-lane themes and a variation of images. The system makes it easy to set up themes into groups, including or excluding any images. For special events, a theme can be made readily available so no time is wasted. There are themes to suit every taste, from Halloween and Wild West to car races on ice. At Switch®, creative ideas are always on the move.



With Switch®,
bowling centres
can now ensure
the very best
service to bowlers

Name your game. Switch® handles it.

The centre's non-bowling activities, such as billiards, darts, laser tag, table tennis and foosball are managed with extreme simplicity and refined imaging. With Switch®, any game or activity on offer is customised. Detailed reports of use and time management are available at any time.



Speed is a way of life.

Switch® bowler console commands are the clearest, most flexible and easiest to use in the industry. Bowlers no longer waste time with long lists of functions. Now, simple commands grouped into specific areas give bowlers more enjoyable game time. They can also place bar and snack bar orders, change a line up, correct a score or even select a preferred theme to show on lane monitors.

Smile, you're on camera.

On busy weekend nights, the Switch® electronic waiting list not only accelerates the handling of customers, it provides an ideal time to take bowlers' pictures and add them to the archive. In just seconds, the Switch® integrated webcam allows operators to take a picture and insert all the relevant data. With Switch®, speed is a way of life.



Automatic upgrades

The Switch® hardware platform comprises the most advanced technology, permitting years of unlimited updates. Software updates are regularly made available online. There's no need for difficult upgrade procedures. With Switch®, it's all done automatically, naturally.



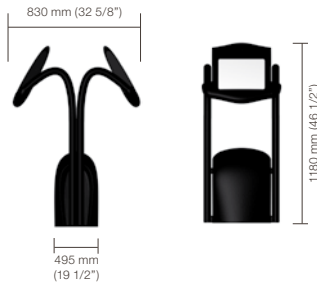
Switch® and the “wow effect”

Switch® high-resolution animations and graphics can be viewed on our quality 32” LCD monitors customised for Switch®. For a wow effect, there is an optional 42” LCD monitor of exceptional quality.



Console

Pininfarina has specially designed the Switch® bowlers' console, featuring a flat panel, special thermo-treated touch screen keyboard... as an option, you can choose a state-of-the-art 15” LCD touch screen.



Switch[®] equipment.
Now that's style!

In the true Pininfarina design spirit...
tables, benches and ball racks that are
stylish, sturdy and functional.
NEW! Switch[®] equipment in dazzling
colours. Red, metallic and yellow.

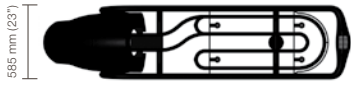
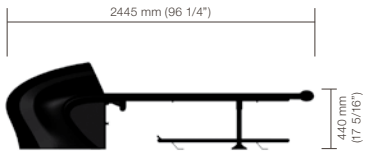


Look for the 'S'
on the hood and rack

The Switch® hood and rack, designed by Pininfarina, with its distinctive 'S'. The elegant tubular frame provides strength and durability. The lower rack is as easy to install as a clip-on component. Fan and reset buttons are conveniently located inside the solid high quality compact polyurethane. Access to the power lift and maintenance area is easy and requires no special tooling.

The Switch® "S" ball return is mounted on a special approach panel fitted with a synthetic sleeve to permit branding and promotion of the approach area. This gives the bowling centre's proprietor an easy and attractive way to generate additional revenue.

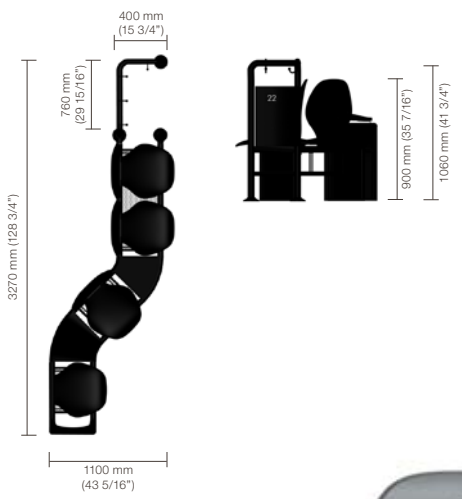
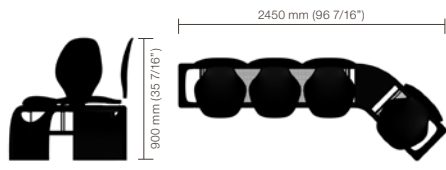




Exciting new
stylish colours



The art of seating... Pininfarina style



Switch® puts the spotlight on Pininfarina design with highly advanced seating arrangements. There are even slightly elevated seats for bowlers waiting their turn. Sturdy shoe racks under the seating eliminate the clutter of shoes on the floor. Coats? Bowlers can hang them up on the Switch® coat racks where they are sitting.

The seating's tubular frame is made of robust metal specially treated for strength and resistance to rust. All connecting joints and legs are made of high-quality compact Polyurethane, painted using the latest robot technology.

The Switch® signature seating is the Pininfarina straight-line arrangement. However, the seating arrangements can be installed in a variety of configurations. Conventional, horseshoe and straight-line configurations are easily rearranged, much like a "Lego" system.

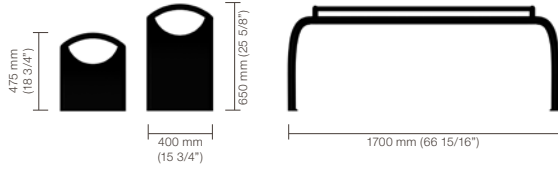
The seating is available in three colours: red, yellow and metallic. In the metallic colour version, the entire seat is glow in the dark, giving an exciting and attractive look to a centre when they switch to a party mood.





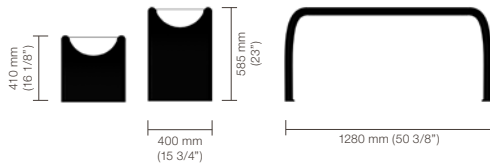
Ball rack

The Switch® ball rack is stable and pleasing to the eye. It stores 12 bowling balls, making them easily accessible to bowlers.



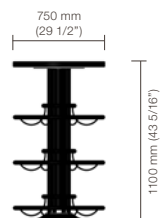
Bench

The Switch® bench, with a tubular frame and polyurethane legs, offers maximum stability. The benches are available in low and high models.

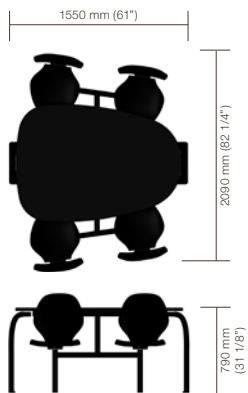


Cocktail tables

Extremely robust Switch® cocktail tables have an incorporated ball rack and glow-in-the-dark tops.



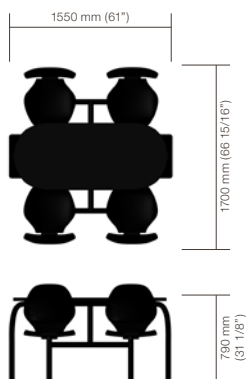
Switch®
Comfort with style



Relax...
Switch®
has you
in mind

Lounge tables (above)
Switch® lounge tables with Pininfarina designed swivel chairs. Large and sturdy, they are ideal for the concourse area, with a shape that offers good visibility toward the centre's action area. The metallic colour version tabletops and seats glow in the dark, thus extending the party atmosphere to the concourse.

Standard tables (below)
Put a spin in your seating. For seating within the bowler's area, Switch® also offers Pininfarina designed tables with swivel chairs. These state-of-the-art tables have glow tabletops and stylish rounded table legs. Switch® engineers designed the sturdy swivel mechanism for long life. The table legs and chairs come in the three colour combinations. The metallic colour version glows in the dark.





Standard sofas (above)

NEW. Available in the three Switch® colours - red, yellow and metallic - the sofa was designed to provide more comfortable seating for bowlers while waiting their turn. The sofas also help bowlers to feel more relaxed in modern surroundings.

Pininfarina "S" sofas (below)

NEW. Switch® "S" shaped sofas have a striking design and capture the Switch® image through comfort, elegance and style. The "S" sofa is also available as a mirror-image sofa. When the two large, comfortable sofas are fitted together, they occupy no more space than the Switch® standard seating arrangements.

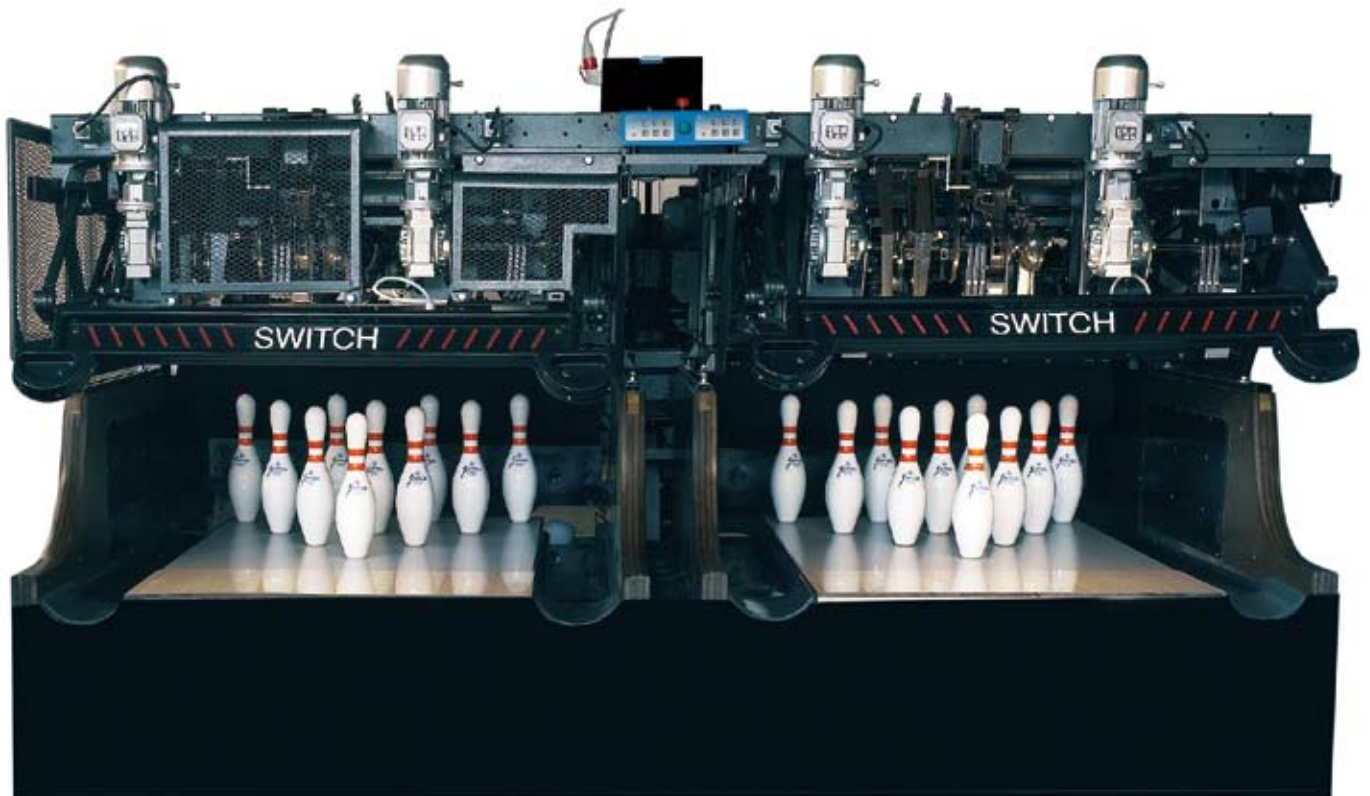


The innovative Chassis has been developed to give total control, both manually and automatically, of every facet of bowling on a pair of lanes.

The composition of the four PC boards in the Chassis works seamlessly to provide many innovative features for both management and maintenance...

Switch®
ST1 Pinsetter

... incorporating the most
advanced technology and latest
safety features.



Interfacing with other bowling systems

Every pinsetter command signal has been provided; Pinsetter On/Off, Ball status (1st/2nd ball instant changeover without cycling the pinsetter), cycle start, sweep reverse, short strike cycle, foul cycle, continuous cycle, integrated bumper and glow light control circuits, fully automatic pin sensing (APS) interface, internally/externally polarised inputs.

These features ensure that the Chassis can be interfaced with most scoring systems in the market today.

Pinsetters equipped with motor encoders as well as those with cam switch systems can also be managed by the Chassis.

The inclusion of the innovative CAN bus (Bosch 2.0 standard) system ensures that the control of bowling games on each and every lane benefits from the high levels of reliability, efficiency, speed and security of the information transmitted and received from the Switch® scoring system. Hard wired connections to other scoring systems are also made possible by the comprehensive input/output circuitry provided in the Chassis.

Unlimited future software updates and customisation will be available thanks to the provision of dedicated connectors on the Chassis. Add-ons such as customised safety guards are also simplified due to the ease with which the Chassis can be re-programmed.



Ethernet connection

The Switch® Chassis is also equipped with a web server that provides for the connection of an Ethernet line. This gives total access to all functions including lane administration data, current and energy monitoring, as well as most other data useful to a bowling centre.

The Chassis has a luminous display on the PC board that is visible to the operator through the transparent rear cover. The status of each input and output circuit is constantly displayed to facilitate fault diagnosis and identify the source of any alarm condition. When an anomaly occurs, the LED assigned to the circuit generating the alarm will become red.

Safety measures

The design of the Chassis reflects the commitment of Switch® to the total safety of both bowling centre staff and clientele. The safety measures incorporated in the Switch® Chassis ensure that both regular maintenance and impromptu emergency interventions will be carried out under the safest conditions in the industry.

In the event of an emergency situation, the voltage supply to all motor control circuits in the Chassis are automatically disconnected, preventing both a cycle start from any source and any attempted manual operation of any of the motors in the ST1.

Continuous monitoring

The Chassis also continuously monitors the status of the pinsetter and the position of the Table and Sweep motors. The Chassis will go into alarm mode immediately following the identification of any anomaly in the normal operational sequence of these pinsetter motors. When the anomaly has been identified and rectified, the normal operation of the pinsetter must be restored manually.

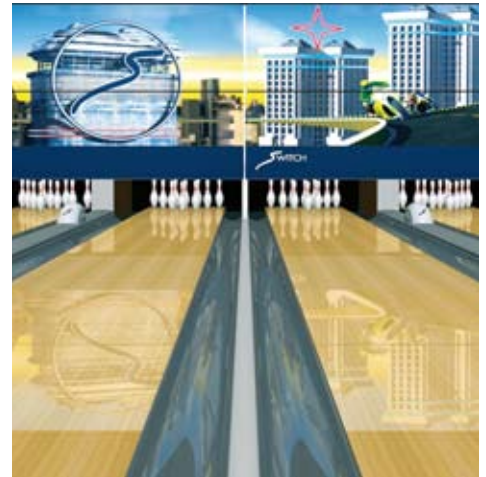
The safety of the pinsetter itself is also continuously monitored by sampling the current absorbed by each component part of the ST1. When any value exceeds the preset limit, the Chassis protects itself and the electrical parts connected to it by shutting down into alarm mode.

Energy Efficiency

The Chassis has been developed with particular attention to energy efficiency and the reduction of mechanical wear and tear on the three-phase Table and Sweep motors and gearboxes.

The use of inverters allows the total control of speed and torque, allowing the motors to reach their peak efficiency and at the same time reduce wear and tear to the moving parts driven by them. Electrical values are constantly monitored allowing the sophisticated central control system to intervene immediately when any irregularity is identified.

Switch® masking units and synthetic lanes



The best
gets even
better

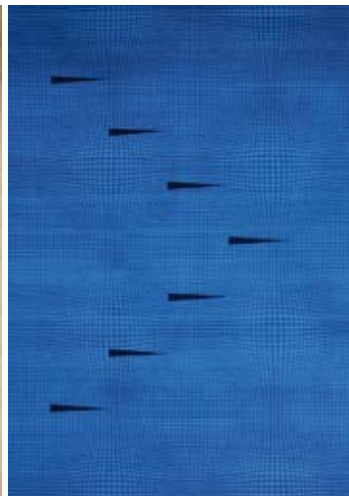
USBC approved Switch® synthetic lanes and pin decks are made by the world-leading laminate manufacturer ABET Laminati in Italy. The lanes are made of a 10 mm thick laminate that complies with EN 438 and ISO 4586 norms. Thickness is achieved using sheets of craft paper impregnated with thermosetting resins.

The resultant panel is then subjected to the combined action of pressure (9MPa) and heat (150°C - 302°F) in special presses in which the resins polycondense. The end result meets the special requirements set by Switch® and USBC, such as self-supporting properties, good dimensional stability and flatness, high-impact resistance, high resistance to wear, high resistance to chemical and organic solvents and excellent resistance to fire.

Non-glow



Matrix



Stargate



Pinstripe



Switch®

Style-setting accessories

Switch® house balls designed by Pininfarina Switch® urethane house balls designed by Pininfarina are eye-catching and cool with a glow-in-the-dark colour ring. Each weight has its own colour code, which adds to the attractive effect on the lanes.



Switch® standard house balls Multicoloured urethane standard Switch® house balls. It's easy to choose the right ball because all weights are colour coded.



Bowling pins

The durable bowling pins are made of the finest quality maple wood and feature a nylon injected moulding and a special base ring to prevent fall out. The extremely attractive pins have UV pigment throughout and are resistant to scratching. USBC approved.

Shoes

Switch® 100% leather house shoes are stylish and comfortable. They are available in lace or Velcro versions. The shoe size is embroidered on the back of the shoe, adding to the attractive style.





Switch® Billiards

NEW. Switch® billiards tables are easily recognisable by their sleek design as well as the vibrant and emblematic blue colour of the carpet. The tables come in two dimensions: 8ft and 9ft.

Full glow carpeting

The Pininfarina 'S' logo decorates the Switch® carpet, in full glow. The carpet is available as an option.

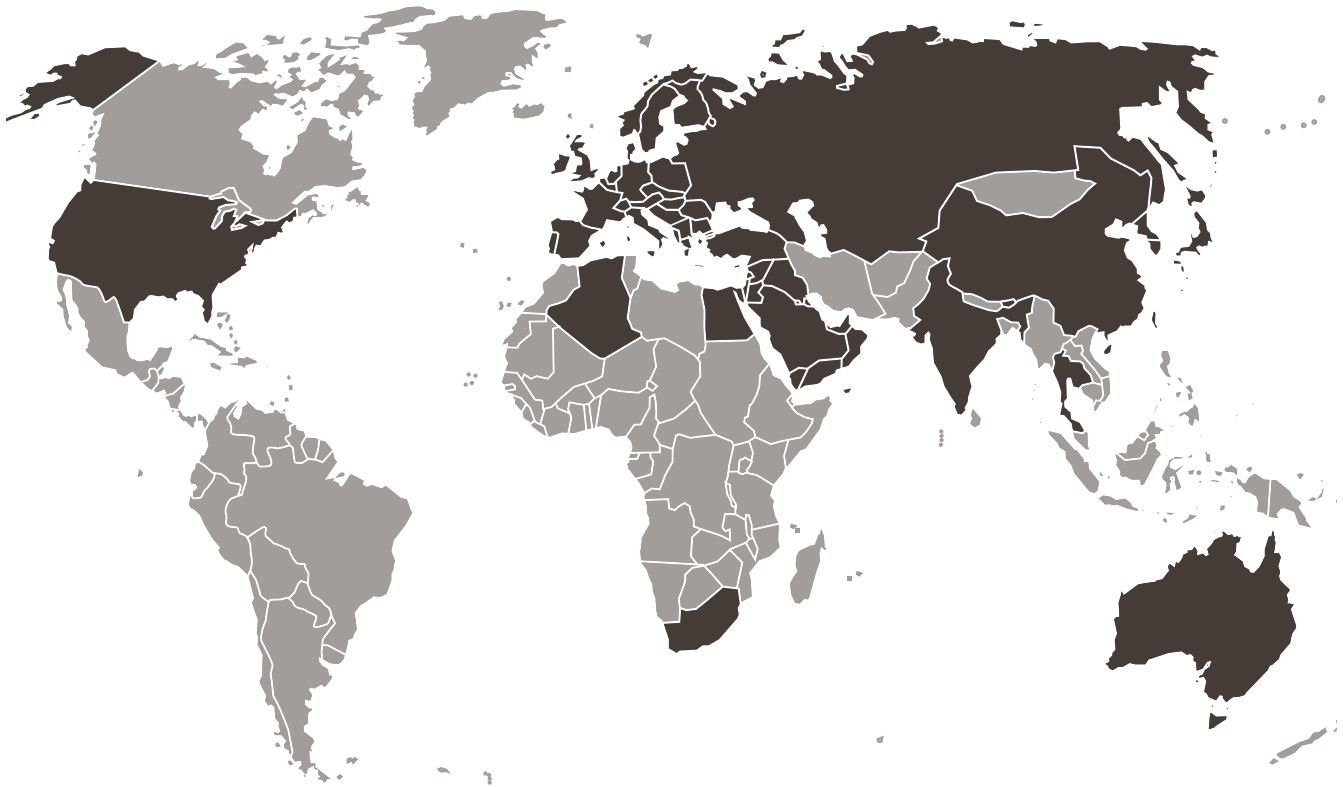


Kegel Crossfire lane machine

The Kegel Crossfire lane machine cleans and conditions a lane in just over one minute. It features an on-board keypad for easy programming, four pre-set programmes for lane play flexibility and three drive speeds. The compact machine uses a spray-jet cleaner application and a fresh cleaning cloth on every lane.



Switch® Distributors



Algeria

Switch Bowling France Sàrl
Mr. Brice Wohlgemuth
p/a Jardins de l'Orangerie
Parc de l'orangerie
6700 Strasbourg, France
Tel. +33 3 90 41 68 02
Fax +33 3 90 41 68 09
brice@switchbowling.fr
www.switchbowling.fr

Australia

Switch Bowling Asia Pacific Pty Ltd
Mr. Steve Jones
Unit #1 15 Enterprise Crescent
6090 Malaga, Western Australia, Australia
Mob +61 408 152 888
Tel. +61 8 9582 3157
Fax +61 8 9582 3141
sjones@e-wire.net.au
www.switchbowling.com.au

Belgium

Corona Bowling Products
Mr. Denis Kroes
Leopoldplaats 10b5
2000 Antwerpen, Belgium
Tel. +31.6.20.24.18.26
office@coronaleisuregroup.be
www.coronaleisuregroup.be

Bulgaria

BG Bowling Ltd.
Mr. Daniel Bondov
2A "Temenuga" str. ap. 5
1574 Sofia, Bulgaria
Tel. +359 (28) 739 412
Fax +359 (28) 739 412
Daniel.Bondov@bgbowling.com

China

Shanghai Biostone Co. Ltd.
Ms. Daisy
Room 708, No.1 Tower, 218 East Guilin Rd.
Xuhui Area
Shanghai 200235, China
Daisy@biostone.com.cn

Egypt

Switch Middle East
Mr. Ahmed El Komy
6th Fl., BMI Building, Khalid Bin Walid Street
Bur Dubai, U.A.E.
Tel. + 971 4 352 6222
Fax + 971 4 352 6226
Mob + 971 50 542 2522
ahmedkomy@usa.net

France

Switch Bowling France Sàrl
Mr. Brice Wohlgemuth
p/a Jardins de l'Orangerie
Parc de l'orangerie
6700 Strasbourg, France
Tel. +33 3 90 41 68 02
Fax +33 3 90 41 68 09
brice@switchbowling.fr
www.switchbowling.fr

Germany

Sabim Deutschland GmbH
Industriegebiet 9
55606 Hochstetten-Dhaun, Germany
Tel. +49 6752 913870
Fax +49 6752 913872
info@sabim-deutschland.de
www.sabim.de

Hong Kong

P & A Engineering Ltd.
Mr. Tony Cheung
Rm 8, 6/F Corporation Square,
Lam Lok St. Kowloon Bay
Kowloon, Hong-Kong, China
Tel. (852) 2755 7182
Fax (852) 2796 2060
tony@panda-eng.com

Italy

Sabim Bowling Marketing Service S.p.a.
Mr. Mario Silvestri
Via Degli Scarlatti,63
41100 Modena, Italy
Tel. +39 059 280 556
Fax +39 059 280 761
info@sabim.it
www.sabim.it

Japan

HI-SPORTS co., LTD
Mr. Hiroshi Kobayashi
2-15-14 Meguro
Meguro-KU
153-0063 Tokyo, Japan
Tel. +91 (0)3 3791 6871
Fax +91 (0)3 3719 1918
h.kobayashi@hi-sp.co.jp

Middle East

Switch Middle East
Mr. Ahmed El Komy
6th Fl., BMI Building, Khalid Bin Walid Street
Bur Dubai, U.A.E.
Tel. + 971 4 352 6222
Fax + 971 4 352 6226
Mob + 971 50 542 2522
ahmedkomy@usa.net

New Zealand

Switch Bowling Asia Pacific Pty Ltd.
Mr. Steve Jones
Unit #1 15 Enterprise Crescent
6090 Malaga, Western Australia, Australia
Mob +61 408 152 888
Tel. +61 8 9582 3157
Fax +61 8 9582 3141
sjones@e-wire.net.au

Romania

SC Ischia S.R.L.
Ms. Elena G. Hincu
George Cosbuc Nr 17 – M2/114
800357 Galati Romania
Mob +40 744 37 27 43
Tel. +40 236 47 55 59
Fax +40 236 47 55 59
rm@ischiasport.ro
www.ischiasport.ro

Russia

Switch Bowling Russia Inc.
Mr. Arkadiy Surenyan
Kastanaevskia street d.16, kop.1
121096 Moscow, Russia
Tel. +7(495)228-78-49
Fax +7(495)739-59-98
info@switchbowling.ru
www.switchbowling.ru

Saudi Arabia

Mabrook J. Al Mabrook Est. for Trade & Service
Mr. Ishak
Behind Eastern Governorate, Dhahran Road
P.O. Box 60422
31545 Dammam, Saudi Arabia
Tel. +966 3 833 34 76
Fax +966 3 833 38 74
almabrookest@yahoo.com
www.almabrookest.com

South Africa

DISC BOWL
Mr. Stan Caminsky
Fantasy Forest
Upper Level Gateway Theatre of Shopping
Umlhanga / KwaZulu Natal, South Africa
Tel. +27 (31) 5665668
Fax +27 (31) 2018091
stanc@hit.co.za

Spain

Sabim Bowling Espana S.L.
Mr. Emilio Ros-Peréz
Avda de Emperatriz Isabel,
5 Bajos
28019 Madrid, Spain
Tel. +34 91 460 0040
Fax +34 91 569 0627
Mob. +34670791612
sabimespana@telefonica.net

Thailand

Green Medicarx Co., Ltd.
Mr. Isra Vibhatavanija
169 Soi Pattanakarn
40 Suanloun
10250 Bangkok, Thailand
Tel. +66 2 722 6985
Fax +66 2 722 7980
visra@mozart.inet.co.th

Turkey

EXEN
Mr. Ahmet Solmaz
Prof. Tarik Zafer Tunaya Sk. N° 14K:B2
34427 Gümüşsuyu - Istanbul, Turkey
Tel. +90 (212) 244 74 94
Mob. +905322313738
as@next-group.com
www.switchbowling.net

Ukraine

Switch Ukraine Inc.
Mr. Oleg Olkhovoyi
Corso Pobedy 84
Bowling Club «Strike»
03190 Kiev, Ukraine
Tel. +380 (44) 501 01 10
Fax +380 (44) 501 01 10
prosport@strike.kiev.ua

United Kingdom

Switch Bowling UK Ltd.
Mr. Terry Fawdington
Gildor House, West Street
LE19 7EJ Earl Shilton / Leicestershire
United Kingdom
Tel. +44 (1455) 851010
Fax +44 (1455) 851777
Mob. +44 7802221021
terryfawdington@switchbowling.co.uk
www.switchbowling.co.uk

The Switch[®] Comprehensive Bowling Centre Installation & Planning Guide has been designed to provide you with the basic requirements for setting up Switch[®] bowling equipment within the overall “Family Entertainment Centre” concept.

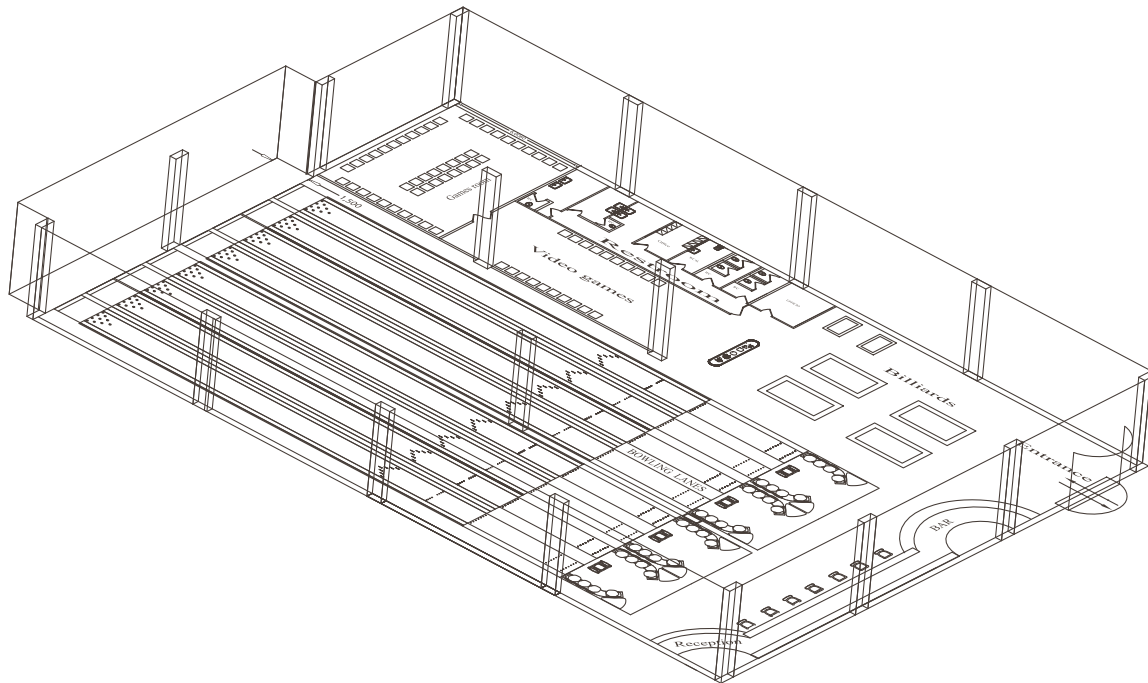
You will also find useful information on ceilings, lighting & sound systems based on our experience.

Centre Configuration

When designing a new building, the structure should ideally have a clear span in the bowling equipment area. The ceiling height should be at least 3.50 metres (11'6").

Bowling centres require a specific heating, air conditioning and electrical specification.

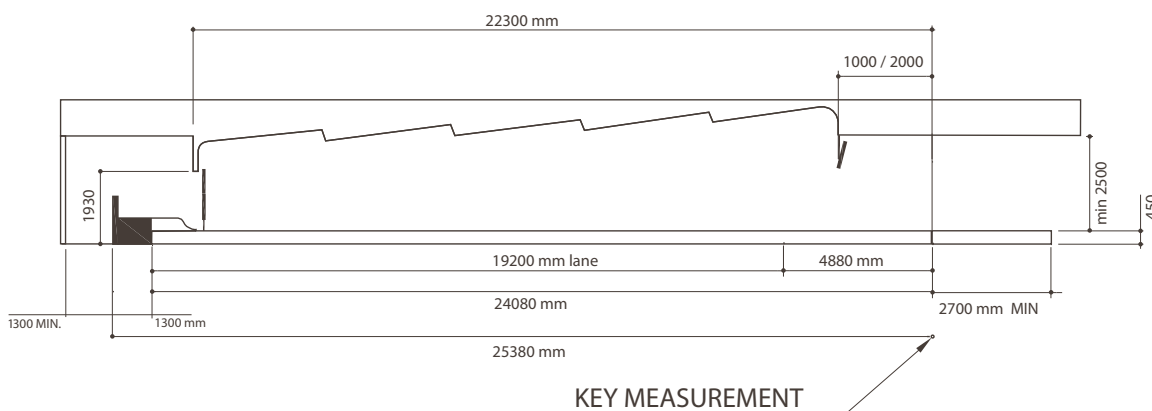
It is strongly recommended to discuss these requirements with Switch® and your architect or contractor, before proceeding.



Building size

To determine the size of the building, use the lane width chart (in the next section) once you have selected the number of lanes you are intending to install. You should then decide what other facilities you would like to provide, such as reception, snack bar, arcade machines, cafeteria, children's area, billiards and party rooms. Within the limits of the possibilities, always include side aisles, otherwise known as service aisles, on each side of the bowling lanes. We recommend one metre aisles, however this is often dictated by the proposed available area.

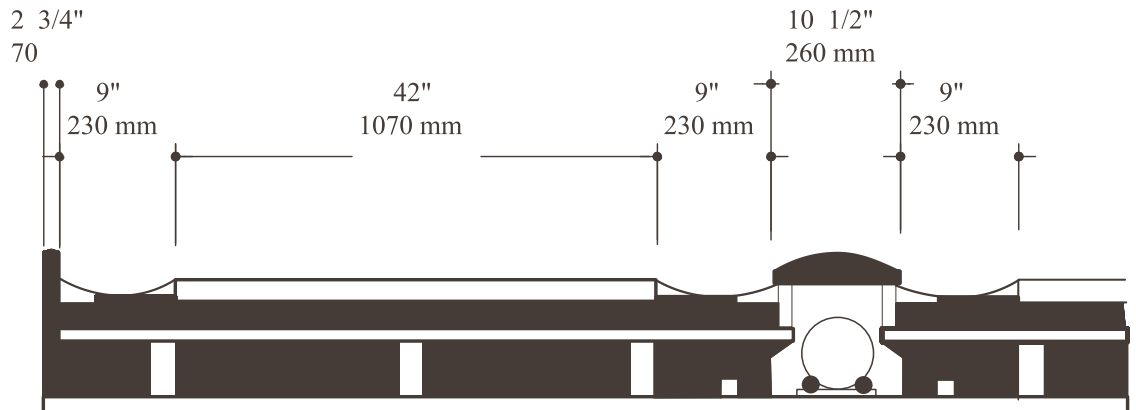
The length is determined by using the length of the bowling lanes (25.38m— 83' 3 1/4"), including the machines, lanes and approach. Then add a recommended (1.50m— 59") clear service passage behind the pinsetters and finally add a minimum of 4.0m— 13'2" for a standard bowlers seating area. For the seating area—and depending on the environment being created—Switch® offers a variety of modular arrangements to help you with a unique configuration, according to the specifications that you and your architect have, and as the space allows.



Bowling Lane Widths

The following dimensions are net measurements of uninterrupted lane widths only. Additions should be made for columns, walls, and passages between or beside lanes.

Number Of Uninterrupted Lanes	Minimum Width	Number Of Uninterrupted Lanes	Minimum Width
2	3.46m (11' 6")	22	37.36m (122' 6 1/2")
4	6.85m (22' 7 1/4")	24	40.75m (133' 7 3/4")
6	10.24m (33' 8 1/2")	26	44.14m (144' 9")
8	13.63m (44' 9 3/4")	28	47.53m (155' 10 1/4")
10	17.02m (55' 11")	30	50.92m (167' 11 1/2")
12	20.41m (67' 1/4")	32	54.31m (178' 3/4")
14	23.80m (78' 1 1/2")	34	57.70m (189' 2")
16	27.19m (89' 2 3/4")	36	61.09m (200' 3 1/4")
18	30.58m (100' 4")	38	64.48m (211' 4 1/2")
20	33.97m (111' 5")	40	67.87m (222' 5 3/4")



Columns in the Lane or Bowlers' Area

Where supports for the structure above the lane are necessary, it is desirable to use a minimum lateral spacing between columns of 6.89 m (22' 7") per four lane bay plus 2.54 cm (1") for clearance to reduce noise transmission. The 4.91 m (16') approach area and at least 0.61 m (2') beyond the foul line should be kept free of columns, if possible.

Floor Loadings

The floor loading values are approximately as follows:

- Approach Area 2KN/m² (Up to 4,90metres from the start of the Approach)
- Lane Area 1KN/m² (From 4,90 metres to the Curtain Wall)

Machine Area

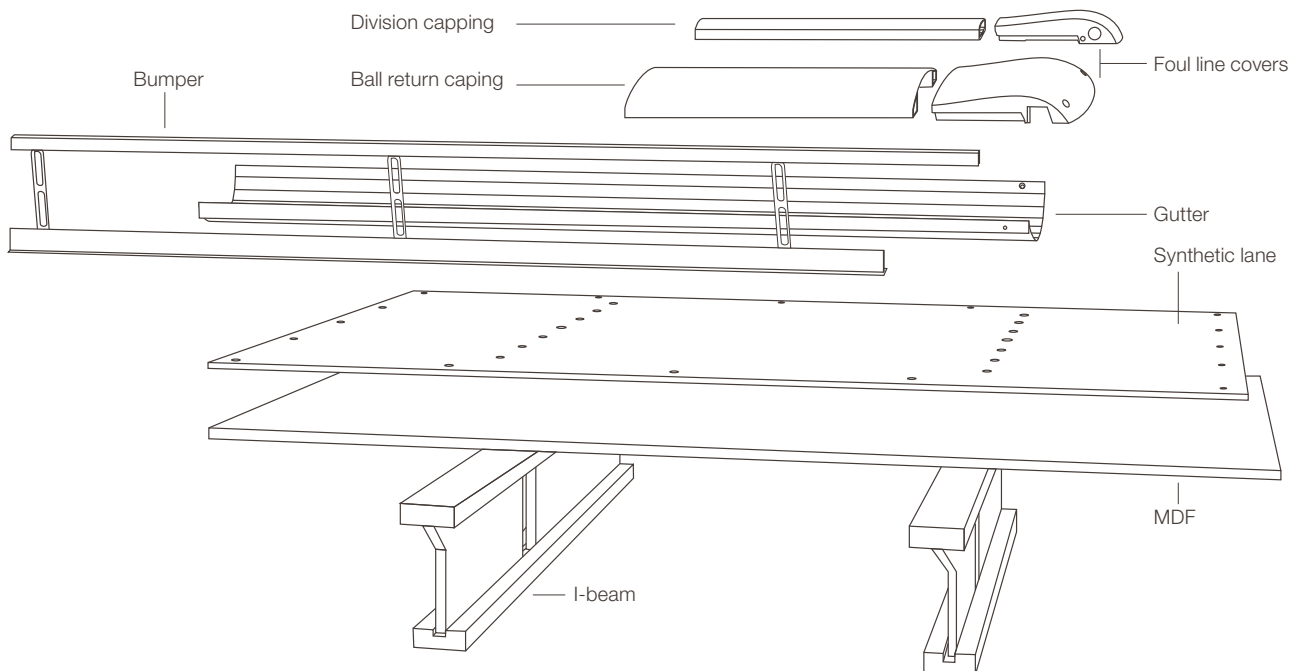
(All the remaining area behind the Curtain Wall) The rear pin elevator of the pinsetters rests on 4x25mm Jack screws. The floor must be able to support a loading of 175Kg. It is recommended that the floor be "Float Finished", and a suitable concrete sealer, paint or linoleum be applied to stop the generation of dust, and to assist with the general maintenance of this important part of the bowling centre.

Second Floor Installation

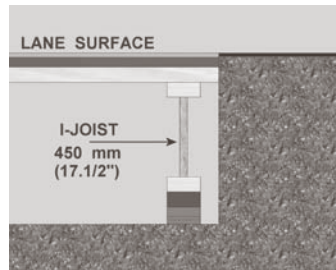
If lanes are to be installed on the second floor or higher, you must provide a floor strong enough to carry the load of the bowling equipment and public occupancy. Consider the noise in the spaces below and adjacent to the lanes. Soundproofing may be required, please ask for further details. Your floor must be constructed to limit vibration. It is the customer's responsibility to provide all access machinery needed to move the Bowling equipment into the desired area (i.e cranes, lifts, ramps Etc).

I-BEAM Foundation (TRUSS JOIST)

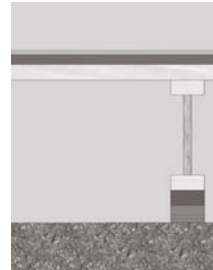
The foundation uses I-BEAM technology and can be installed very quickly. The I-beams run at 90° to the lanes.



Approach to Bowlers Concourse



End of approach panels with drop slab.
(Flush approach to bowlers concourse area)



End of approach panels with drop slab.
(Step approach to bowlers concourse area)

Seating Area

It is the customer's responsibility to supply the seating area and all steps up or down on to it. Switch® Technicians will install the seating and scoring equipment at the appropriate times. Dependent on the design and available space, the seating area can be flush to the approach or a step (height dependent on local authority regulations). A step can provide a demarcation between areas and also help against the travel of dirt. However, a flush seating area to approach is advantageous with disabilities, and will require no maintenance in the future but will require a specialist demarcation strip.

Pinsetter Power Requirements

The Switch® Pinsetter uses 3-phase power on all motors. Local Voltage and Frequency (380V/50 hertz, 415V/50 hertz, 220V/60hertz, etc.) must be established before the order is placed.

The Electrical Installation of the Switch® Pinsetter is designed to be simplified, since one 5-core cable per pair of lanes is all that is required for the Pinsetter and Ball Return installation.

The power supply to the Ball Lift (bowlers end) & the Foul Detector is also included in the Switch® Pinsetter control box.

However, it is the responsibility of the customer to provide 2 X 50mm diameter plastic pipes, for under lane cabling and wiring for each pair of lanes (scoring, signal and ball return power cables). The pipes will be approximately 20 metres long, and be placed one on each side of the ball track. The pipes will be installed by the Switch® technicians during installation (effectively 1 x 20 metres pipe per lane) .

The Switch® Pinsetter Control Box is fitted with the following safety features :

- Overload Protection - Each pinsetter has its own circuit breaker incorporated.
- Residual Current Device - (Earth Leakage protection). Each pinsetter circuit breaker is controlled by an RCD to ensure that the risk of electric shock is kept to a minimum.
- Minimum Voltage Monitor - Since 3-Phase motors are used in the Pinsetter, a special circuit has been provided to protect against the damage that could be caused, if for any reason there is an unacceptable imbalance between the 3 phases, an imbalance occurs or a phase is lost completely, the power is automatically disconnected.

All protection against potential danger overload, earth leakage, and unacceptable phase imbalance, is included in the Switch® Pinsetter control box, reducing the cost of the electrical installation, since these features do not have to be provided in the Main Distribution Panel for the Pinsetters.

A "General Circuit Breaker" or Isolator for each group of 6 to 8 lanes is sufficient.

One 5-core (5 x 4mm²- 3 phase + neutral + ground) is all that is required per pair of lanes.

The cable should be installed above the Pinsetters, at approximately 3 metres behind the Curtain Wall, above the Pinwheels.

Scoring Installation

Structural

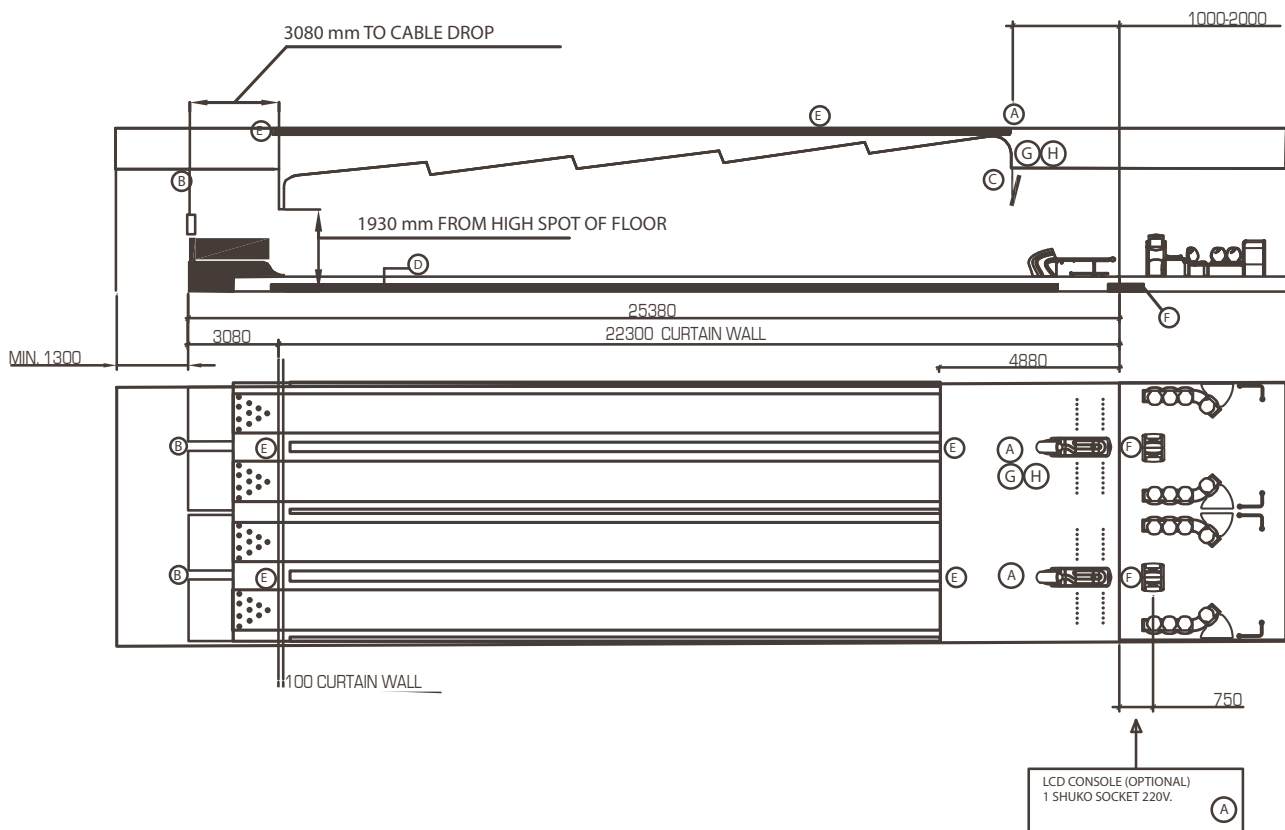
A suitable support for the overhead monitors should be installed to hold approx 150 Kilos per pair of monitors. We are happy to advise in the positioning of the support however this work should be carried out prior to the arrival on site of the Switch® installation crew. Your Architect needs to certify the loading capacity.

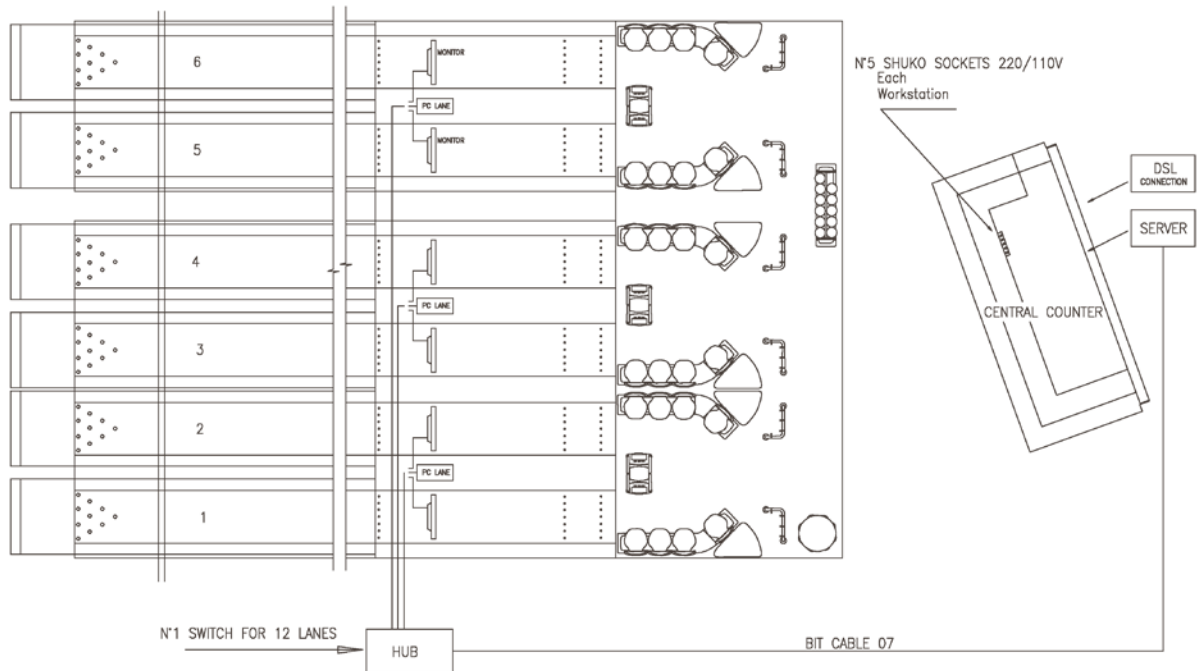
Electrical

Overhead Monitors – A dedicated two gang 220v -240v power supply is required per pair of monitors in line with the centre of the ball return tracks in the ceiling.

Bowlers Console – The power is supplied by the Switch® Scoring System for the standard keyboard console, however if the touch screen monitors are ordered, a dedicated two gang 220v - 240v power supply is required at the “Bowlers Consoles” in the seating area. Cable conduits should be prepared below the finished floor at the bowlers’ seating area.

Front Desk – The equipment supplied requires six two gang 220v - 240v dedicated supplies, it is recommended to discuss the positioning with the customer, architect, contractors & Switch® before installation. In addition to the power supply, a dedicated ADSL / Broadband phone line should be installed beside the front desk for software help, updates, general remote maintenance & support.



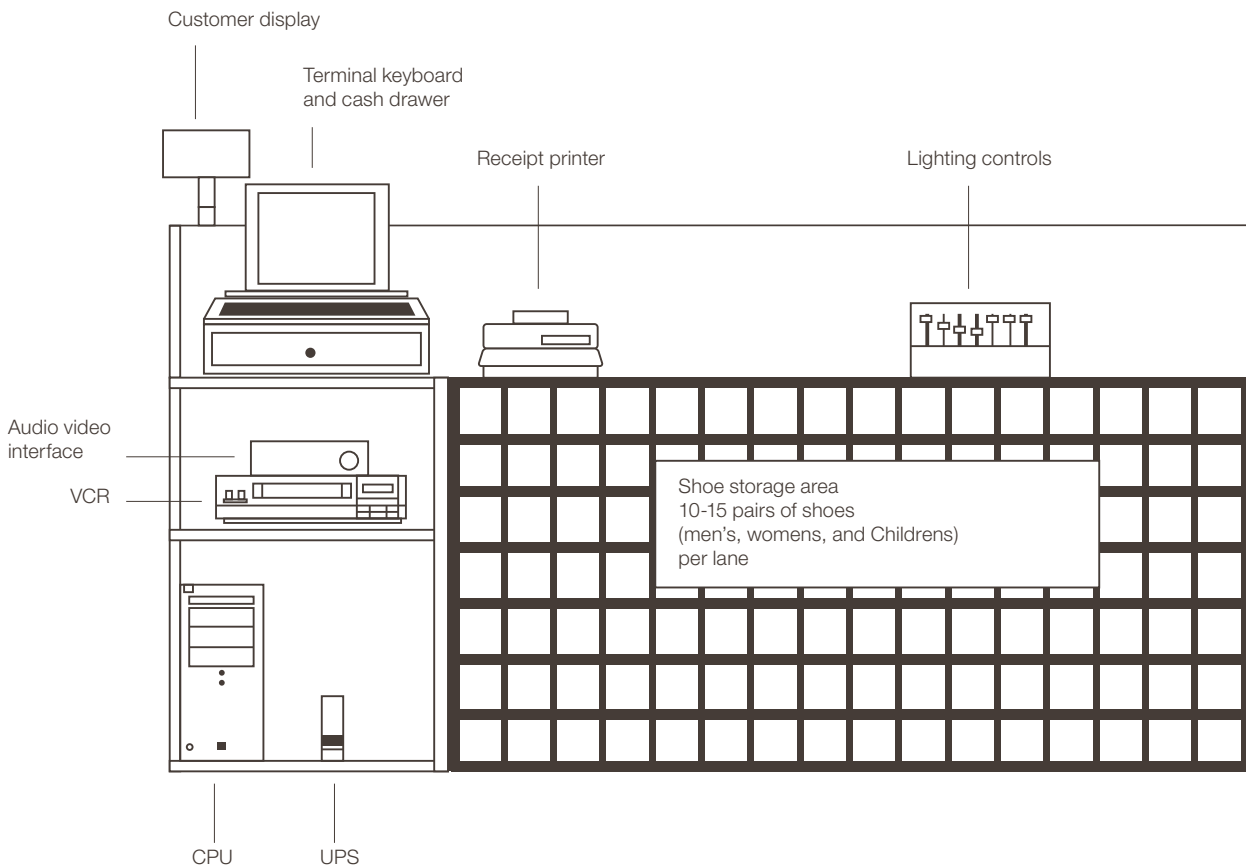


SWITCH ELECTRICAL INSTALLATION FOR ST-1 PINSPOTTERS		SEE NOTE #
A	"SHUKO" STYLE SOCKETS SINGLE PHASE WITH GROUND.	1
B	380 - 415V 50 HZ. 3 PHASE + NEUTRAL + GROUND. CABLE 5 X 4mm.	2/3
D	1 X CABLE DUCT DIA. 50mm. PER LANE FOR SIGNAL AND BALL RETURN POWER CABLES. (UNDERLANE).	4
C	MONITOR SUPPORT ABOVE CEILING. MUST BE CERTIFIED TO 150Kg. PER LANE PAIR.	5
E	1 X CABLE DUCT DIA. 50mm. PER PAIR LANE FOR SCORING SIGNAL CABLES (OVERHEAD).	4
F	1 X CABLE DUCT DIA. 50mm. PER PAIR LANE FOR SCORING SIGNAL CABLES.	6
G	1 X SINGLE PHASE CIRCUIT FOR COMMUNICATION HUB.	7
H	1 X 50mm. CABLE DUCT FROM HUB TO RECEPTION FROM DESK.	8

1	MONITOR AND LANE COMPUTER POWER SUPPLY - 3 SOCKETS PER PAIR OF LANES CLOSE TO MONITOR SUPPORT.
2	CABLE SHOULD DROP FROM CEILING OR TRAY. PLUGS/SOCKETS SUPPLIED BY SWITCH.
3	ELECTRICAL CHARACTERISTICS (220/380/415/440--50/60HZ.) TO BE CONFIRMED WITH EQUIPMENT ORDER.
4	1 X 50mm. DIAMETER PIPE X 20 METRES PER LANE TO BE SUPPLIED BY THE CUSTOMER.
5	EXACT LOCATION OF MONITOR SUPPORT TO BE DECIDED BY CUSTOMER BEFORE INSTALLATION COMMENCES. CENTRE LINES OF BALL TRACKS CAN BE CALCULATED AND MARKED AS FOLLOWS: 1.MEASURE 1730mm.FROM THE OUTSIDE OF LANE #1 (WALL, CORRIDOR, ETC.)THIS IS THE CENTRELINE OF LANES #1/2. 2.ADD 3390mm.TO THIS MEASUREMENT TO FIND THE CENTRES OF ALL OTHER BALL TRACKS. ADDING ON ANY EXTRA WHERE THERE ARE LANE SEPARATIONS, EG. COLUMNS.
6	1 X 50mm. DIAMETER PIPE X 1 METRES PER PAIR OF LANES TO BE SUPPLIED BY THE CUSTOMER.
7	1 X SINGLE PHASE SOCKET CENTRALLY LOCATED ABOVE CEILING.
8	1 X 50mm. CABLE FROM OVERHEAD MONITORS TO RECEPTION (CENTRALLY LOCATED).

Typical Front Desk layout

The front desk is one of the most important areas of the bowling centre. Dependent on the Switch® package ordered, the amount of space required, and also the amount of time each customer will need to be at the front desk will be affected, (for example, no bowlers console means names will be required at the time of check in).



Lighting over Lanes and Approach Area

It is critical to ensure proper lighting is installed over the Bowling equipment to create the desired environment with no shadow being created, especially in the lane area, which is a highly reflective playing surface. Extreme care must be taken to avoid "Hot Spots" of light, a standard "Saw Tooth" (Suspended Ceiling) arrangement usually prevents the effects of "Hotspots"

The lighting system should be installed with as much built in flexibility as possible to enable "mood" changes at designated times during the trading hours. Remember, different areas will need specific lighting levels, front entrance, bar, games areas etc. All Switch® equipment and the lanes are UV reactive. Black (UV) lighting installed creates a stunning glow effect, the more UV applied the greater the effect. (Rule of thumb – Match UV (black) with the same amount of White). The glow lanes lend themselves to enhanced special effects lighting including Disco lighting effects. Your Switch® representative can advise on suitable Sound and Light Systems.

It is best to control lane lighting longitudinally switched in banks of 4 lanes, from the control desk, with the special effects lighting across the house.

Do not forget to include in your planning a high quality Acoustic Sound System, for creating the moods through music, customer announcements and general information transmissions. All modern facilities need to be designed with the acoustics having been given careful consideration, to create that quality feeling.

Power Consumption

The power consumption of a pair of lanes is a maximum of 4 KW, assuming that all motors are running at the same time. This is not the case during operation. However, the Sweep and Table motors run intermittently. Based on this calculation, a 48 lane facility would theoretically require the provision of 96 KW, but in practice it would be less, due to the intermittent operation of the motors.

Bowling Area Pre-installation

All overhead works above the Bowling installation must have been completed. For example; lighting, ceilings, alarm systems, air conditioning, ducting, electrical cable trays etc. Also supports for Switch® scoring monitors and all electrical installation. No "Wet Trades" (plasterers, bricklayers, and decorators etc.) are to be working in the immediate area of the Bowling installation.

Temperature and Humidity

These controls must be in place, either by the completion of the permanent air conditioning system, or by the provision of temporary equipment. Temperature and Humidity levels must be consistently maintained as close as possible to those of the conditions foreseen for the future operation of the Bowling Centre. In any case, the temperature and humidity levels during Lane installation must be within the following limits:

Temperature

Temperature should be maintained between 16 and 23 degrees Celsius.

Humidity

Humidity should be between 40% and 60% Relative Humidity.

Switch® declines any responsibility for any movement and/or distortion of synthetic lane panels subjected to ambient temperatures and humidity levels out with the above limits.

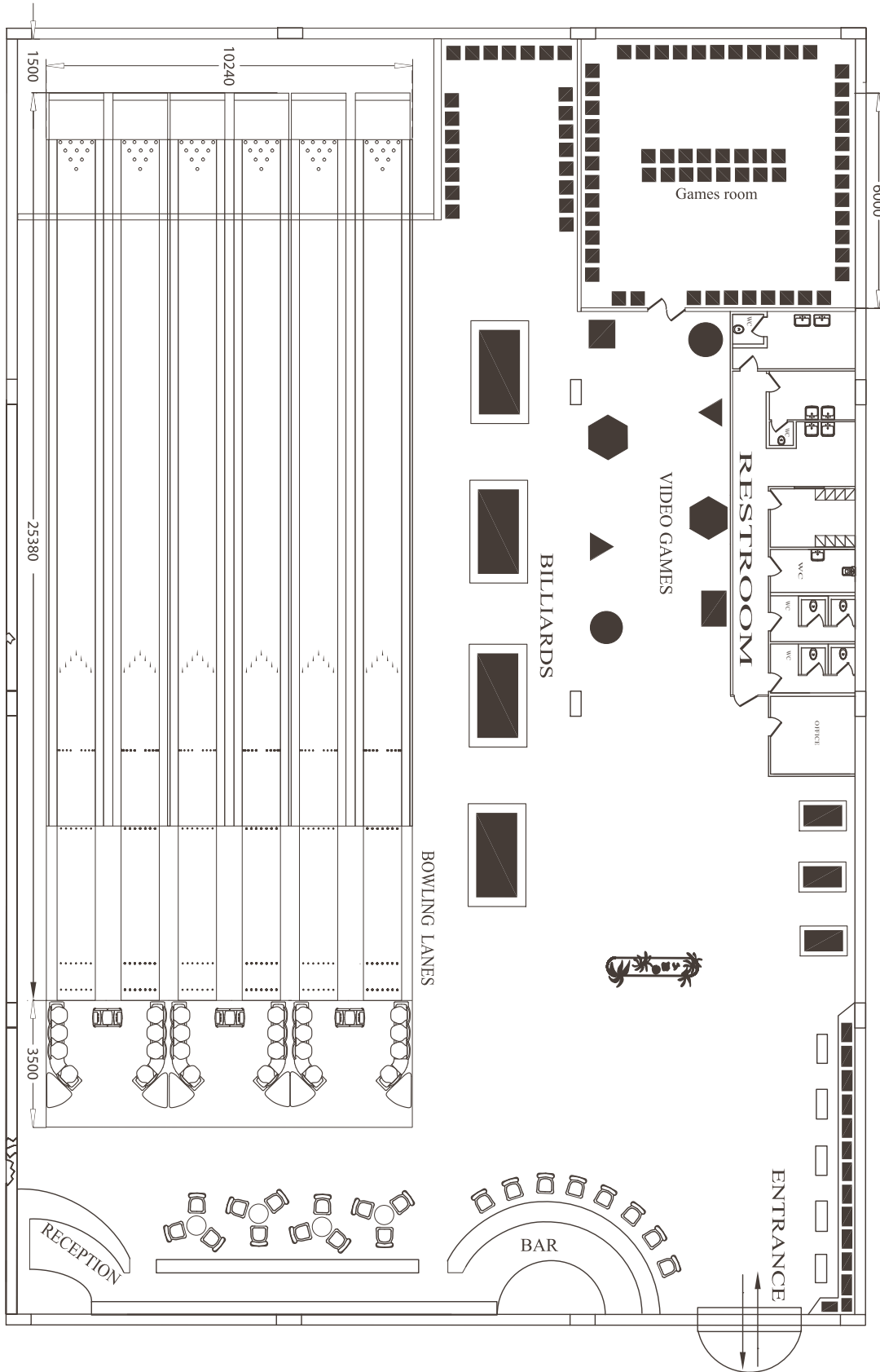
In the event that lane panels have to be stored on site, or elsewhere, for long periods, it is important that prior to installation, the panels are given sufficient time to re-stabilise to the ambient conditions on the installation site. In the event that other construction work has to be carried out in the immediate area of the Bowling installation, the Bowling area should be sealed off by polythene sheeting so that ambient temperature and humidity can be kept constant.

A Reliable Power Supply

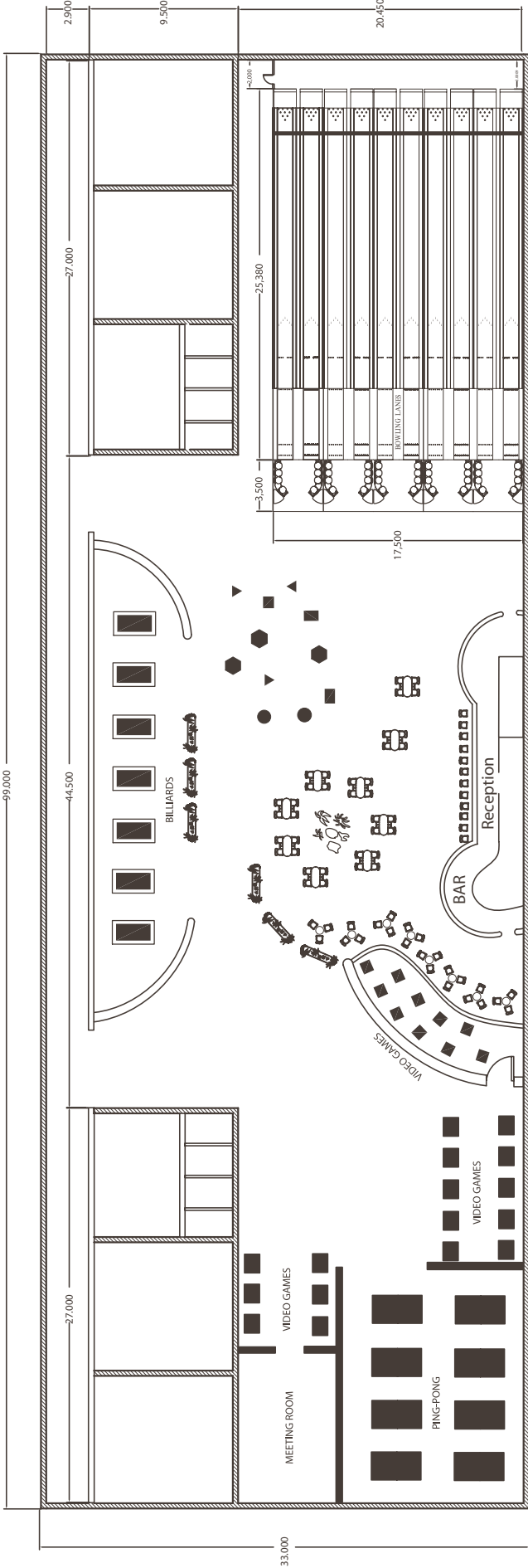
Reliable power should be made available to the Switch® installation crew for power tools at no charge. An area in which to store Switch® specialist installation tools is also required.



Typical six lane layout



Typical ten lane layout



Switch Entertainment S.A.
Rue César-Soulié 5
1260 Nyon, Switzerland
Tel. +41 (0) 22 365 18 80
Fax. +41 (0) 22 365 18 85
info@switchbowling.com

Switch Logistics S.r.l.
Via Peri, 71
41100 Modena, Italy
Tel. +39 (059) 284838
Fax. +39 (059) 284838
logistics@switchbowling.com

Switch Electronics S.r.l.
Via Peri, 71
41100 Modena, Italy
Tel. +39 (059) 284838
Fax. +39 (059) 284838
electronics@switchbowling.com

Switch Bowling & Billiards LLC
Mr. James Borin
Dallas, Texas
United States of America
Tel. +1 972-6-SWITCH
James@switchbowling.com



www.switchbowling.com