



Technical Standards for Slot Machines

**Superintendency of Gambling
Casinos (SCJ)**

CHILE

Modifications to the Technical Standards for Slot Machines

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1. Introduction

This chapter discloses the intent, purpose and objective of the technical standards for slot machines. It also describes the bases of the testing procedure.

1.1. Purpose

This document contains the technical standards that describe the minimum requirements applicable to the assessment of slot machines that could be used in the Republic of Chile.

It is recommended that to get a better understanding of this document, also all other regulations applicable to the activity of casinos authorized in the Republic of Chile under the protection of Law No. 19,995 and its regulations are read.

1.2. Objective

The purpose of this document is to provide clear and concise technical standards for the evaluation of slot machines to be used in the Republic of Chile.

The intent of this document is to specify the necessary and sufficient requirements to ensure that the games within the Republic of Chile are:

- ❖ Fair,
- ❖ Dependable,
- ❖ Auditable,
- ❖ Random

1.3. Essays

1.3.1 Testing performed on gaming devices by certification laboratories, should be oriented to verify the compliance with all requirements set on this technical standard. In the event that the laboratory has doubts about the scope of a requirement for the aim of defining whether it fulfills or not it, they shall file the necessary consultation to the Superintendence of Casinos (SCJ).

In any case, for those gaming devices to be rejected by the certification laboratory for failing to fulfill the technical standard, it will not be required to prepare a rejection report for the Superintendence of Casinos on the website of the respective laboratory.

1.3.2 Except where specifically explicit in this technical standard, tests or essays are not oriented to health or safety issues, or to ensure legislative requirements administered by other regulatory bodies, such as electrical wiring and the emission of frequencies, etc. These issues fall under the domain and responsibility of the manufacturer, buyer and operator of the devices. Each of these entities must ensure the full compliance with these demands or requirements.

1.4. Definitions

Masters meters: The name of the meters can vary as long as they keep their functions in accordance with the above and can be clearly committed according to their function.

- ❖ **Total in:** The slot machine should have a meter which accumulates the total value of all bets, whether arising by inserting banknotes, tickets, downloaded credits earned credits or other means. This meter must:
 - a) Not include subsequent bets from intermediate profits accumulated during the game sequence, such as those acquired in "double up" games.
 - b) In the case of multi-game slot machines and multi-denomination / multi-games slot machines, this monitor must record the necessary information based on a pay table to calculate a weighted percentage of actual payment. It must record the total accumulated by every game of the slot machine without the need for an individual "Total In" meter for each game in the slot machine.
- ❖ **Total out:** The slot machine must have a meter that accumulates the total value of all amounts paid directly by the slot machine as a result of winning bets, whether payment is made directly from the printer issuing a ticket or directly to the player's credit or by any other means. This meter should not record amounts paid as a result of external bonus system.
- ❖ **Incoming notes:** The slot machine should have a meter which accumulates the total value of bills accepted. The slot machine should also have a specific meter for each denomination of accepted bills that will register the number of banknotes for each denomination accepted.
- ❖ **Ticket in - value:** The slot machine must have a meter that accumulates the total value of all cashable tickets (in money or representing a value in money) accepted by the slot machine.
- ❖ **Ticket in - number:** The slot machine must have a meter that accumulates the total number of cashable tickets (in money or representing a value in money) accepted by the slot machine. If this value is not provided directly by the machine, it must be delivered by it to a validation or monitoring system.
- ❖ **Ticket out - value:** The slot machine must have a meter that accumulates the total value of all cashable tickets (in money or representing a value in money) issued by the slot machine.
- ❖ **Ticket out - number:** The slot machine should have a meter that accumulates the total number of all cashable tickets (in money or representing a value in money) issued by a slot machine. If this value is not provided directly by the machine, it must be delivered by it to a validation or monitoring system.
- ❖ **Transferring funds form a cashless account:** The slot machine should have a meter which accumulates the total value of cashable credits (in money or representing a value in money) transferred electronically to the slot machine from a betting account by means of an external connection between the machine and a cashless system. To this end, the player can use a plastic card that stores or has information to access available funds.
- ❖ **Collecting funds to a cashless account:** The slot machine should have a meter which accumulates the total value of cashable credits (money or representing a

value in money) transferred electronically from the slot machine to a betting account by means of an external connection between the machine and a cashless system. To this end, the player can use a plastic card that stores or has information to access available funds.

- ❖ **Large prizes hand paid by the floor staff:** The slot machine must have a meter that accumulates the total value of all amounts hand paid by the floor staff, due to a unique winning combination of the base game, which amount cannot be paid by the slot machine automatically because of the maximum win amount limit set in the configuration. This meter should not record amounts paid as a result of an external bonus system or progressive jackpots. The large prizes that are manually entered (keyed) to the player's credit meter, SHOULD NOT increase this meter.
- ❖ **Credits paid by the floor staff:** The slot machine must have a meter that accumulates the total value of all amounts hand paid by the floor staff due to cash collection initiated by a player which amount could not be paid by the slot machine by exceeding the physical ability or because of the maximum win amount limit set in the configuration.
- ❖ **Large progressive jackpots hand paid by the floor staff:** The slot machine must have a meter that accumulates the total value of all amounts hand paid by the floor staff as a result of a progressive jackpot, which amount cannot be paid by the slot machine automatically, because of the maximum win amount limit set in the configuration. This meter must not include payments made as an outcome from an external bonus system.
- ❖ **Progressive prizes paid by the slot machine:** The slot machine must have a meter that accumulates the total value of all amounts paid directly by the slot machine as a result of hitting a progressive jackpot. This meter should not include payments made as an outcome of an external bonus system.
- ❖ **Promotional ticket in- value:** The slot machine should have a meter which accumulates the total value of all non-cashable promotional tickets accepted by the slot machine.
- ❖ **Ticket in promotional - number:** The slot machine should have a meter that accumulates the total number of non-cashable promotional tickets accepted by the slot machine. If this value is not provided directly by the machine, it must be delivered by it to a validation or monitoring system.
- ❖ **Promotional ticket out - value:** The slot machine should have a meter which accumulates the total value of all non-cashable promotional tickets issued by the slot machine.
- ❖ **Promotional ticket out - number:** The slot machine should have a meter that accumulates the total number of all non-cashable promotional tickets issued by the slot machine. If this value is not provided directly by the machine, it must be delivered by it to validation or monitoring system.
- ❖ **Admitted non-cashable electronic promotion:** The slot machine must have a meter that accumulates the total value of non-cashable promotional credits electronically transferred to the slot machine from a promotional account using an external connection between the machine and a cashless betting system. To

this end, the player can use a plastic card or other authorized media by the Superintendence, which stores or has information to access the available funds.

- ❖ **Collected non-cashable electronic promotion:** The slot machine must have a meter that accumulates the total value of non-cashable promotional credits electronically transferred from the slot machine to a promotional account using an external connection between the machine and a betting cashless system. To this end, the player can use a plastic card or other authorized media by the Superintendence, which stores or has information to access the available funds.
- ❖ **Betting with non-cashable promotional credits:** If there is such functionality available, the slot machine must have a meter that accumulates the total value of non-cashable promotional credits wagered. This includes the promotional credits that are electronically transferred to the machine or accepted through promotional tickets, so in this definition credits used by tickets and plastic cards are included.
- ❖ **Games played:** The machine must have meters that accumulate the number of games played since the game initialization (erasing non-volatile memory).
- ❖ **Progressive occurrence:** The slot machine should have a meter indicating the number of times progressive prizes have been awarded. (This should be interpreted as a requirement for the controller also, whether it is within the same slot machine, or corresponds to an external progressive controller, so that when the progressive function is configured, it must deliver the result of this occurrence meter for each existing progressive level).
- ❖ **Credits wagered meter:** The slot machine must have a meter, visible from the front outside of it, known as credits wagered meter, which gives information to the player about the total value of the amount wagered in a game or specific round of the slot machine.
- ❖ **Winnings meter:** The slot machine must have a meter, visible from the front outside of it, known as winning meter, which gives information to the player about the total value of amounts won in the game or round just concluded in the slot machine. The value of each prize at the end of a game must be added to the player's credit meter, except hand pays. The value of all prizes awarded must be added to the player's credit meter, except for hand pays.
- ❖ **Credits paid:** The slot machine must have a meter, visible from the front outside of it, known as paid credit meter, which gives information to the player about the total value of the latest collection initiated by him, wins paid directly by the slot machine, large prizes paid manually by floor staff or credits collected by the player, paid by the floor staff. This information should be shown to the player unless there is an error or malfunction condition.
- ❖ **Available credits for betting meter:** The slot machine must have a meter, visible from the front outside and specifically labeled as credit meter, which shows the player the number of credits or monetary value available for bets on the slot machine. From the total number of credits available in each machine, promotional credits must be used first, and then the cashable credits.
- ❖ **Progressive or combinatorial progressive:** Is a system where a combinational progressive jackpot, which is one activated by a specific combination of symbols of the game program arranged in a slot machine, is unfolded before

players. Ex., five matching symbols where such award is operated in accordance with the rules of the game (winning symbol combination).

- ❖ **Progressive prize:** It's the prize that increases as a result of the increment percentage that comes from the contributions of the bets placed by players, plus the initial value set in the game program by the operator.
- ❖ **Stand-alone progressive and linked progressive:** If a specific progressive can only be won in a single slot machine, it is an individual or stand-alone progressive; all other progressive are considered interconnected or so-called progressive linked.
- ❖ **Local progressive:** Is a linked progressive where two or more slot machines, located on the same gaming hall, are linked.
- ❖ **Wide area progressive or inter casino progressive system (WAP):** Is a progressive system that links interconnected slot machines located in more than a gaming hall. For purposes of this type of system, it has to meet the provisions of Circular No. 41 of this Superintendence, dated October 18th, 2013, as well as the legislation that replaces, complements or develops it.
- ❖ **Progressive controller:** Is a logical hardware and software which controls all communications between devices. The controller calculates the values of the progressive and displays information within the link participants and associated meters (progressive controllers could be internally managed by the game control program and/or by the Online Monitoring and Control system or SMC). A progressive controller may consist of more than one dedicated component and includes but is not limited to, computers, cabling, interface boards, collection nodes, etc.

2. Hardware

This chapter sets out the requirements for hardware of slot machines.

2.1. Introduction

Monitoring of slot machines

- 2.1.1. If you are connecting an electronic slot machine to an external device such as an Online Monitoring and Control System (SMC), this technical standard does not define fully the requirements of electronic hardware interface. It is a requirement that the manufacturer (or supplier) of the external equipment for the slot machine provides all hardware and software elements necessary to make such connection. In the event that the communication program is embedded in the main program, the certification laboratory shall carry out the relevant tests of communication to evaluate the program, the certificate detailing those protocols used.

2.2. General

Approval of the slot machines

- 2.2.1. In the SCJ you can get the information of the necessary procedure to obtain the approval of slot machines according to Supreme Decree No. 547, of Finance, 2005, approving the Regulation of Gambling Casinos and Homologation System.

- 2.2.2. Each instance of the game device provided by a manufacturer to the casino game shall be functionally identical to the specimen tested and approved by the appropriate certification laboratory, unless there have also been approved the changes observed in relation to the specimen tested.

2.3. Machine cabinet

Cabinet identification

- 2.3.1. A metallic or hard plastic identification plate shall be affixed on the external part of the machine to identify the slot machine, so that it is easily readable. This plate must be attached to the cabinet so that it is not possible to remove it without leaving evidence of such circumstances.

The information to be included on this plate must be, at least, the following:

- ❖ Manufacturer's name,
- ❖ Commercial name of the machine model,
- ❖ Unique serial number of the slot machine,
- ❖ Manufacturing date of the slot machine.

- 2.3.2. All switches and buttons used by players in the game must be properly labeled in Spanish language and safely, indicating the function or series of events that are initiated by their operation.

Exceptionally, in the event that these texts are expressed in a language different to Spanish, such information shall be also included in Spanish language, either on labels affixed to the slot machine, or in a notebook, corresponding to a notebook or small book, which must be attached to the cabinet by some mechanism to ensure that it is visible, easily accessible to the player and difficult to remove. For exceptional cases, the laboratory must certify the translation of such information, thereby including them on the respective certificate.

Artwork

- 2.3.3. Information regarding the requirements of artwork to be used in gaming devices is in Chapter 4 of this standard.

Cabinet construction

- 2.3.4. The materials used for construction (including doors), must have the appropriate mechanical strength to withstand unauthorized access attempts to which slot machines are likely to be exposed in a casino. If an illegal opening of the machine is attempted, there must be physical evidence of this fact in the cabinet. Materials such as steel, aluminum, metal alloys, polymers, heat resistant glass or laminated glass are examples of permitted materials.

- 2.3.5. Any part of the slot machine that may be exposed to liquids should be made of corrosion resistant materials or at least have a protection of this kind, such as anticorrosive paint.
- 2.3.6. The cabinet shall be designed to protect internal components from external abuse to which the machines could be submitted in a gambling facility.
- 2.3.7. The cabinet must not have sharp edges or protrusions that could pose a danger to players or any other person using the machine. The responsibility to ensure that the manufacturing processes used in the physical parts of the cabinet are such that eliminate the presence of any of these elements with sharp edges or protrusions remains on the manufacturer.
- 2.3.8. All protrusions (for example, buttons, handles) of the cabinet that are accessible to the general public, as well as the affixed elements (for example, labels and serial plates), should be robust enough to reasonably resist removal without authorization.
- 2.3.9. The shape of the cabinets must be designed in such way that the only legal entry into the slot machine is using an installed door for that purpose.

Doors

- 2.3.10. It must be installed a lock on each door to prevent unauthorized access to the machine. Using sensors to detect any door opening should be part of security mechanisms. The sensors must be installed so that it is not possible any attempt to manipulate them from outside the cabinet.
- 2.3.11. The doors must be locked easily and successfully.
- 2.3.12. The hinges must be of solid construction to prevent the door from warping and any alignment problem of the door sensor is generated.
- 2.3.13. The devices used to limit the opening of the door must be robust.
- 2.3.14. The seal between the cabinet and the door of a locked area should provide minimum free space (slots).
- 2.3.15. It should be designed a sealing between the cabinet and the door of a locked area, so that the entry of any object through it is prevented.

Spills

- 2.3.16. Liquid spills on the external part of the slot machines shall not affect normal its normal operation, the integrity of the material or information stored within or safety of players who operate the equipment. It is understood that as a result of a spill of liquid, the functionality of some peripheral components such as touch screens, bill acceptors or printers, may be lost

temporarily or permanently, which should be clearly marked with a condition error. Notwithstanding the foregoing, it should be possible to return the slot machine to its original state by the replacement or repair of these components.

For this, each horizontal surface, surfaces used to place glasses or containers with liquids and generally any other surface that is in front of the slot machine must have gaskets that prevent the leak of liquids from the outside to the inside of the machine.

With the slot machine off, one liter of water will be discharged at 0.25 liters per minute on each surface to be tested. The slot machine will be left undisturbed for one (1) hour, and then the following will be checked:

- ❖ Liquid spills should not affect the normal operation of the slot machine or modify the information stored in its memories.
- ❖ It is understood that touch screens may experience a failure in their performance. However, once the surface dries, the touch screen must recover all its capabilities, or indicate an error condition.
- ❖ Spilled liquid cannot reach the logic area or logic box, power supplies or high voltage wiring.
- ❖ Spilled liquid must not affect the normal operation of the buttons used for the game operation.
- ❖ If the spill occurred in the bill acceptor or tickets, the only permitted flaw is rejection of all tickets or notes that are trying to be inserted, indicating an error condition.

NOTE: For all the conditions included in the "Liquid spills" section, certifiers may be based on laboratory tests carried out in specialized laboratories in electrical testing that have the appropriate ISO 17025 accreditation and its subsequent amendments. In this case, the certification laboratory must include in its certificate of compliance a single copy of the test certificate provided by the manufacturer, stating which technical standard was used for the test, like IEC60335-1, by the specialized laboratory which performed the liquid spill testing.

Keys and locks

2.3.17. The cabinet (and door) shall be designed to allow proper and safe operation once the locks are installed.

Cabinet security

Key secured areas

2.3.18. All elements that are not part of the game interface offered to the player must be located within some area of the slot machine that can be locked.

These locked areas should be equipped with detection devices for door access (except for areas that only provide access to lighting devices).

- 2.3.19. According to the requirements, areas containing critical components or those whose manipulation may alter the integrity of the machine shall be locked. Among others, they should be locked the front door, the logic area, the stackers. In any case, the keys for each function and / or door should be different so it will not be possible for the same key will allow the opening of more than one door.
- 2.3.20. Where there are holes, spaces or grooves on the outside of a locked area (in the external of the slot machine cabinet), there must be sufficient protection to ensure that the possible insertion of external objects will not threaten the safety of the area closed.
- 2.3.21. A locked area should be able to reasonably resist any attempted of no authorize entry and must show evidence that such situation has occurred.

Detection devices for door access

- 2.3.22. External doors and those which give access to sensitive areas (including and not limited to the logic area) should have sensors that will monitor any opening of them as long as power is being supplied to the slot machine and inform this situation to the game control programs of the slot machine. Such records must be stored in the control system without modification or deletion option except on clearing memory or by over writing due to null free space for the required registration.
- 2.3.23. Should not be possible to disable a door sensor without having to open such door correctly (for example, using a key).
- 2.3.24. It should not be possible to insert a device in the slot machine that can disable a door opening sensor when the machine door is closed; leaving no evidence that there was such tampering.
- 2.3.25. If a door access detection system is disconnected (including the stacker), the slot machine shall report this action as a state of "door open".
- 2.3.26. In relation to the main doors, logic door and bill validator door, the sensor system must register as a "door open" condition when the door moves from its fully closed position locked. Conversely, it should not be possible for the sensor system to register that the door is closed when, in fact, the door is not completely closed.
- 2.3.27. This door access detection system must be secured against illegal attempts to disable or interfere with its normal operation.
- 2.3.28. Gutters and wiring for the door access detectors should be placed, so it becomes obvious any action on them.

- 2.3.29. Sensor cables for opening cabinet doors should be long enough to ensure that they can be accommodated and molded along the inner walls of the cabinet.
- 2.3.30. Access to the area where the communication bus from the CPU resides, the address bus and control lines and communication of the CPU will not be possible without accessing the logic area. This requirement does not apply to those buses that, as per their function, must leave the logic area, such as the PCIe bus for video communication.

Logic area

- 2.3.31. The logic area corresponds to an area of closed cabinet with a safety device (with its own door, lock, and either a key or other mechanism) which houses electronic components that have the potential to significantly influence the operation of the machine gambling.
- 2.3.32. The following are the components or electronic items that need to be housed in one or more logic areas:
- ❖ CPU and other electronic components involved in the operation and calculation of game (eg electronic game controller components and components that host the firmware storage device or gaming system program).
 - ❖ Electronic components involved in the operation and calculation determining the outcome of the game and form its accounting.
 - ❖ Electronic components involved in the calculation of game display, and components housing the storage device deployment program (except passive equipment deployment). Exceptionally, if such components cannot be accommodated in the logic area they may be housed in a secure area, protected from the outside, without having its own lockable door.
 - ❖ Electronic components from communication controllers and components housing the storage device of communication programs, as well as those associated with the entry and security of the slot machine. Exceptionally, if such components cannot be accommodated in the logic area, they may be housed in a secure area, protected from the outside, without having its own lockable door.
 - ❖ Interfaces and controllers that connect to Monitoring and Control Online System for slot machines, hereafter SMC, excluding mechanical meters. Exceptionally, if such components cannot be accommodated in the logic area, they may be housed in a secure area, protected from the outside, without having its own lockable door.
 - ❖ The backup device from the non-volatile memory will be housed within the logic area.

Certification laboratories will evaluate exceptional cases, informing of this situation to SCJ in the respective certificate, indicating, at least, location and security mechanism for the components.

- 2.3.33. May stay outside a logic area communication interfaces, I/O (Input / Output) interfaces and display interfaces that may not significantly influence in the operation of the slot machine.
- 2.3.34. The logic areas must be implemented with detection systems for door access that will allow the game control software of the slot machine to detect if the logic door is open or closed.
- 2.3.35. If the detection device of access to the logic area fails, the systems of the slot machine should assume that the logic door is open and respond accordingly alerting, for example, by means of an audible or luminous signal, recording the event in the Online Monitoring and Control System.
- 2.3.36. The logic area must be located within a closed locked area of the slot machine; if not, that area must have two physical locks (this does not exclude physical seals, if required).
- 2.3.37. It will not be possible to restore the normal operation of the game, if the processor board is out of the machine or if the sensor (s) is (are) indicating that the logic door is still open.
- 2.3.38. It should not be possible to insert a device in the logic area (without its detection or without leaving evidence of this attempt) to deactivate the sensor of the logic door opening, when the door is closed.

Electrical requirements for the cabinet

Cabinet Wiring

- 2.3.39. Slot machines cabinet shall be designed in such a way that power and data cables entering and exiting the machine can be hidden so that they are not accessible to the general public.
- 2.3.40. It would not be possible to remove nor the security devices wiring nor the logic area wiring, without disabling the detection system for the logic door access.
- 2.3.41. They shall be taken internal precautions (following established engineering practices) for the route and wiring protection, in order to minimize the introduction of electrical noise in the data and control lines.
- 2.3.42. It should be identified in the operator's manual, all plugs, connectors and terminal blocks that are part of the electrical system of the slot machines, according to the circuit diagrams and electrical assembly. These should be

installed so that cannot be reached by players. They also must have an external protection to prevent electrical shock during normal operations.

- 2.3.43. Hardware switches and/or bridges that may alter the game specific jurisdictional settings configured, pay tables, denominations or theoretical payback percentages must comply with the applicable sections of this document and must be housed within a logic area in the gaming device. This includes changes on large prizes (including the progressive jackpots), selectable settings or any other options that could affect the payout percentage. Wires and cables that are mounted on a door and extending into the slot machine should have a high flexural strength.

DISCLAIMER: For all requirements included in the titles "connectors, fuses, power cord and switch on and off (On / Off)" and "Electrical Safety", certification laboratories may be based on tests carried out in specialized laboratories for electrical testing that have the appropriate ISO 17025 and its subsequent amendments. In this case, the certification laboratory will include in its certificate of compliance a single copy of the test certificate supplied by the manufacturer, which states the technical standard used (for example, IEC60335) by the specialized testing laboratory for electrical testing.

Connectors, fuses, power cord and switch on and off (On/Off)

- 2.3.44. The connectors must be toothed, so to prevent insertion in the wrong direction.
- 2.3.45. Connectors and sockets must be of good quality, capable of performing multiple insertions without exhibiting signs of unreliability, and terminal blocks must have a strain relief protection if required.
- 2.3.46. The connectors must withstand variations of at least $\pm 20\%$ of rated current operation.
- 2.3.47. Each fuse box, switch, lamp socket, slot connector, etc., must be attached to a non-movable base to avoid accidental displacement.
- 2.3.48. All fuses should clearly be identified, as its amperage, in the operation manual of the machine. This information can also be displayed either in the fuse box, or in a contiguous area.
- 2.3.49. The power cord must be plugged into the power source in the slot machine; the cabinet shall provide appropriate access points for the cable.
- 2.3.50. The power cord may be fixed or removable. If it is removable, the cable connector must be female type connector and the power source must be of the male type.

- 2.3.51. The power cable connector and the connector of the power supply must be grounded.
- 2.3.52. The on/off switch must be located within the slot machine and cannot be reached by the player. They should clearly identify the on and off positions.

Electrical safety

- 2.3.53. The electric engines used in a slot machine must have protection circuits against overload. These circuits must be of any of the following nature:
 - ❖ Thermal,
 - ❖ Inductive
 - ❖ Any other similar to thermal nature.

If the slot machine has electronic engines, each of these should be mounted on a non-conductive platform.

- 2.3.54. The slot machine should be able to withstand voltage fluctuations of $\pm 10\%$ of the voltage supply.

NOTE: It is acceptable that the computer is restarted under the condition that does not cause any damage to equipment, loss or corruption of data. After re-start, the game should return to its previous state. It is acceptable for the game return to a state of complete game if the history and all credits and accountants understand a game completed.

- 2.3.55. The cabinet must have a grounding point properly identified. Each electrical part of the machine must be connected to this point.
- 2.3.56. Ground connections should stop leakage currents using appropriate fuses. Leakage currents are considered dangerous if they exceed 3.5 milliamps.
- 2.3.57. It is considered that a part or element of the slot machine can cause an electrical shock when this part or element has a gradient of voltage versus ground point indicated here more than 42.5 AC voltage (VAC) or 60 Voltage Current Continuous (VDC) or when a gradient greater in milliamp current flows in a 1500 ohms (Ω) reactor connected to this gradient.

Any of these parts in the slot machine must be electrically insulated.

- 2.3.58. The insulation resistance should be measured with a megohmmeter of 30,000 Ω internal resistance and a 250 VDC.
- 2.3.59. The impedance of the ground conductor, when measured between a part, item or accessory that needs to be grounded and the ground point

described in paragraph 2.3.55 of these standards, may not be greater than 0.1 Ω .

- 2.3.60. Power transformers used in the slot machine shall be isolated.

Interferences with the cabinet

Temporary interruption test

- 2.3.61. Slot machines may present a temporary disruption when exposed to significant electrostatic discharge (ESD) that is greater than the discharge that can cause the human body, but must have a capacity to recover and complete any game interrupted, without loss or alteration of any information or data associated with the control of the slot machine.
- 2.3.62. Only momentary interruptions of slot machines are allowed, if the machine has the ability to recover at the same point where the interruption occurred and finish the game running or making payment of the largest prize won in the event that it has been granted, or to return to the final screen with the result of the game, where the reels were previously spinning. This situation should not alter meters or integrity of information kept by the gaming device.

Power failure

- 2.3.63. In case of power failure, and once it is restored, the slot machines must recover and return to the game at the exact point it was when the interruption occurred, on the same terms set out in section 2.3.62 of these standards. It is not considered the use of an uninterruptible power supply (UPS) as an acceptable way to enforce this rule.

Certification Laboratories are responsible for these tests and determine approval, reporting it to the SCJ.

Environmental effects

- 2.3.64. Random number generator. The random number generator and the random selection process will be immune to influence from outside of the device, including but not limited to electromagnetic interference, electrostatic interference and radio frequency interference.
- 2.3.65. Electro-static interference. The anti-static protection requires that the slot machine conductive cabinets are connected to ground so that static discharge energy will not damage or permanently inhibit normal operation of the electronic or other components located within the machine. The slot machine may display temporary interruptions when exposed to a significant, greater electrostatic discharge which corresponds to the human body, but must have the ability to recover and complete any game interrupted without loss or corruption of any information or data associated with the

control of the slot machine. The tests will be conducted with a maximum severity level of 27 kV air discharge.

2.4. Computer and peripheral hardware

Memory Requirements

Nonvolatile random access (non-volatile random-access memory, NVRAM)

- 2.4.1. It must be installed sufficient NVRAM in the slot machines to allow storage and recording of all information required on the relevant software sections of this standard. Certification Laboratories will be responsible for determining how much NVRAM is required and verify its compliance, reporting to the SCJ.
- 2.4.2. Data stored in NVRAM must be able to reliably be preserved for not less than thirty (30) calendar days, unless there is a primary source of power, and indefinitely if there is no interruption in the primary power source. It may include a backup power source, rechargeable or non-rechargeable. If a power supply rechargeable backup is used, it must have the ability to recharge itself to its full potential within a maximum of 24 hours.
- 2.4.3. Slot machines whose power supply source backup is off-chip, with the aim of preserving the contents of the nonvolatile memory, a backup power supply will have to be used for when the main power source is off, and must have a detection system that provides a method for the software to understand this situation and act as if it was a fault condition of the backup source and a low battery situation, before the main power source backup really reaches a level where it is no longer capable of keep the memory running.
- 2.4.4. The power source backup must be recharged to its full potential in a maximum of twenty-four (24) hours; life should be at least five (5) years and shall check his fault condition or low voltage every time it switches on and at least every twenty-four (24) hours.
- 2.4.5. The backup power source shall be hosted within the logic or in a locked area with separate lock area.
- 2.4.6. Any manipulation of NVRAM memory, such as deletion, will only be possible by accessing the logic area in which it is housed, which must be secured with lock and key. In case of having an alternative memory manipulation system, the laboratory should evaluate the safety of it and inform of it in the respective certificate.
- 2.4.7. Following the start of a resuming process of non-volatile memory, the game program must be initialized, restoring all memory to its default state (predefined or default). For games that allow partial erase of non-volatile

memory, the methodology for carrying out the process, shall not affect in any way, that part of the memory that has been deleted.

Critical memory requirements

- 2.4.8. Nonvolatile critical memory must store all data that is considered vital for the continuous operation of the slot machine. For more information see Section 3.2.1, Critical memory content.

ROM (Read Only Memory)

- 2.4.9. The game program must be stored in a ROM. The ability to download games from a local server is regulated in Circular No. 38 from SCJ, dated September 2013, and regulations replacing it, amending or developing it.

Other storage device, such as hard drives or compact flash, which allow reading and writing, may be used. The condition is that the inability to change the game files and ensure that the writing of information is limited only to audit and control values or unpacking the operating system, for which refer to sections 3.2.10 and 3.2.11, "Critical memory content".

In cases of CD-ROMs, DVDs and other storage programs based on optical disks must:

- i. Not be a rewritable disc; and
- ii. The "session" should be closed to prevent any further writing.

- 2.4.10. Storage devices for the game program must be removable to be read and calculate the electronic signature verification (algorithms as MD5 or SHA-1). If those were not removable, it should implement additional mechanisms which can calculate and display such electronic signature.

- 2.4.11. Slot machines may not change the content of the ROM. In the case of downloadable games from a local server, the process of recording the new game into the appropriate memory will not be considered a violation of this requirement, if it meets the rules specified in paragraph 2.4.8, Critical memory requirements

All ROMs should be labeled (as well as other programmable logic elements), with an adhesive label containing at least the following information:

- ❖ Manufacturer's name,
- ❖ Identification code or version of the software stored in the program storage device (PSD),
- ❖ Position socket on the PCB.
- ❖ The last four characters of the electronic signature used (MD5, SHA-1, etc.).

For media types in which may reside multiple game programs, it is acceptable to display this information through the Assistant Menu.

Furthermore, exceptionally, in the case of memories whose physical dimensions do not allow that a label with all the information listed above may be attached, it is permitted that the label contains at least the last four characters of the electronic signature used, notwithstanding that all of that information must be recorded in the respective laboratory certificate.

- 2.4.12. All EPROMS must have their erasing windows covered.

Physical or hard meters

- 2.4.13. Hard meters are not mandatory, but if used, they should not have the ability to be lowered or restored, and if either situation happened, must show evidence of the fact.
- 2.4.14. They shall be located within a locked storage area. In any case, they should be able to be read and should be properly labeled.
- 2.4.15. Each meter should be able to display a minimum of six (6) digits.
- 2.4.16. The cable connection between hard meters and the logic area should be positioned so that is not accessible to the public. Cable meters can only be disconnected from the slot machines in the following ways:
- ❖ Accessing the logic area or,
 - ❖ In the connection plug of the hard meters, removing a hard cover that requires the use of a tool or wrench.
- 2.4.17. Replacement of any part of the slot machine shall not include the mandatory replacement of hard meters. These meters should only be replaced when not functioning correctly.

Circuit boards

PCB identification (Printed Circuit Boards - Printed Circuit)

- 2.4.18. Manufacturers must ensure that the assembly of printed circuit board used in their slot machines, correspond in functionality and documentation with those that were tested and certified by the testing laboratory versions;
- 2.4.19. Must identify each printed circuit board (PCB) using some kind of name, part number or revision level.
- 2.4.20. The factory revision level of the printed circuit board must be identifiable (if path cuts or wires connecting the PCB are added, a new revision number or assembly level must be assigned).
- 2.4.21. The card will permanently display the IDs referred to paragraphs 2.4.19, 2.4.20 and upcoming.

- 2.4.22. Every socket of the integrated circuits within the PCB must be identified using a code and/or appropriate name.

Construction and modification of a PCB

- 2.4.23. The connecting cables must be of robust and reliable nature.
- 2.4.24. All connection cables and path cuts must be document appropriately, within the relevant service manual.
- 2.4.25. All program storage devices (PSD) of critical control affecting the integrity of the game within the space of executable processor addresses in a critical processor must have pins or plugs for their connection. If not having those, then it should be a mechanism to authenticate the device content.

Switches and jumper's selector

- 2.4.26. It must be certified that the switches and jumpers that may affect the safety of the slot machines, the theoretical payback percentage or meters, are placed within the logic area, excluding the switch referred in 2.4.28.

Power supply

- 2.4.27. It must house inside the slot machines.
- 2.4.28. The power supplies switches should show the on and off positions (for example, On/Off).
- 2.4.29. Optionally the slot machine may contemplate a mode of "energy saving", which may be operated automatically or manually. For example, the lighting system of the slot machine is turned off, but relevant communications and security features of the machine still remain active. If the slot machine is in "energy saving" mode, it should not be possible to execute the game functions of the machine.

Information display

Wheels and electromechanical reels

- 2.4.30. Display devices for electromechanical control, such as spinning reels, wheels, etc., must have a control loop, close enough as to activate the software and detect any malfunction situation, or any attempt to interfere with the correct operation of that device.
- 2.4.31. Reel assemblies must have clearly identified reference points, where the beginning of the tape with the symbols of artwork is located.
- 2.4.32. The reel assemblies must be done in a way that the symbols winning combinations match the pay lines.
- 2.4.33. The spin of the reels must not be obstructed by any other components.

Video monitors

- 2.4.34. The monitors and associated protective elements must be mounted safely and need to be made of a hard and resistant material capable of resisting possible abuse from players.

Touchscreens

- 2.4.35. Touch screens must be accurate and scratch resistant under normal use conditions. Once calibrated shall maintain in such accuracy at least during the maintenance period recommended by the manufacturer.
- 2.4.36. A touch screen should be able to be recalibrated by the floor staff, without having to have access to the machine cabinet beyond opening your front door and/or by using a service key.
- 2.4.37. There will be no hidden buttons or touch points or undocumented anywhere on the screen that affect the game and/or impact the result thereof, except those specified in the rules of the game.

Printers

- 2.4.38. If a slot machine comes equipped with a ticket printer, it must be located within an area of the slot machine that is secured under lock and key (for example, requiring the opening of the main door) but not inside of the logic area.
- 2.4.39. When a ticket printer is used in a slot machine, it will have to have either the ability to generate two copies simultaneously from any printed ticket, or use a system such that the slot machine or ticket system will keep sufficient evidence of the printed ticket and its contents to satisfy the questions from the player and an all-purpose audit of the operator and the regulator.

The slot machine must have the ability to keep information in the last twenty-five (25) printed tickets to solve possible disputes with the player. In addition, an approved system will be used to validate the ticket payment and ticket information on the central system, which will be recorded for at least the time the ticket is valid in the gaming hall where it was issued.

If offline ticketing is allowed, the slot machine MUST hide all except the last 4 digits of the validation number when the report of the twenty (25) tickets set on the precedent paragraph is displayed. Also the validation system must generate two (2) different types of tickets, at least; the "online" and the "offline" ones, which are denoted respectively by the generation of the ticket in the situation when the validation system or ticketing system (TITO) and the slot machine will be properly communicated the validation system, or when the slot machine and the system are not properly being communicated, respectively.

When a player starts a collection from the slot machine that has lost communication with the validation system, the machine can print an "offline" type of ticket or stopped in a condition of hand pay where a manual receipt may be generated. The "offline" ticket or receipt for a hand pay should be visually look different from the "online" ticket in format or content, although it shall still keep all information requirements.

In any case, for purposes of the information to be included on the printed tickets, it has to consider the provisions of the general instructions imparted to this end by the SCJ.

- 2.4.40. The printer must have mechanisms to allow the software to understand and act accordingly, at least under the following conditions:
- ❖ No paper/low paper;
 - ❖ Paper Jam/ printer failure; and
 - ❖ Printer disconnected.

In either condition, the machine will detect the error and inform floor staff.

- 2.4.41. Rules for issuing tickets:
- a) The slot machine must not issue more offline tickets than those for which it has the ability to record at the slot machine their information and deploy the register of issued tickets.
 - b) After a lost communication event, when offline tickets can be issued, in the process of requesting the new seed (Re-Seeding), the slot machine should not ask for validation numbers and seeds, keys, etc., corresponding to values used for issuing the tickets, until the information of all outstanding offline tickets has been fully communicated to the ticket validation system.
 - c) The slot machine should ask for or request a new set of validation numbers and seed, key, etc. (New seeds or Re-Seeding) corresponding to values used for issuing online/offline tickets, if the current list of validation numbers and seed, key, etc. is in risk of being compromised, which may include, but not be limited to, the following cases:
 - i. After the power supply has been restored, and / or
 - ii. After leaving a condition of open front door.
 - d) The values for the seed, key, etc. should never be visible with any display of the slot machine. Additionally, the validation numbers should always be covered (masked) when visible through the display of the slot machine so that only the last four digits of the validation number visible.

- e) If it is possible to issue offline tickets, there must be an authentication identifier offline as well, which at least should be printed on the next line immediately after the validation number in the main edge, so that in any way the printing of the validation number of the ticket is compromised.

The authentication identifier must be obtained from a key generating method or hash, or any other secured encryption method of at least 128 bits, which will identify the ticket as exclusive, will verify that the redemption system is also the issuing one and will validate the amount in the ticket.

- f) For cases where the offline authentication identifier cannot be printed on the ticket, the slot machine will not print a ticket after the loss of communication between the slot machine and the system.

NOTE: Some of the information referred to in this section may also be part of the validation number or barcode. Multiple bar codes are permitted and may represent more than the validation number only.

Offline ticket redemption may be validated by a specific internal processing on the slot machine that issued the ticket. A hand pay for the same amount of the offline ticket can be done.

Alarms

- 2.4.42. It shall be provided an appropriate audible or visual alarm for the slot machines, so it can effectively be communicated any error condition or safety features that this standard requires.

The slot machine will have a candle light placed visibly on top that automatically will illuminate when a player has won a prize or is collecting credits that the machine can not automatically pay, an error condition has occurred (including 'Door Open'), or a 'Call assistant' situation initiated by the player is taking place. In bar top machines it is allowed that the light is shared with other machines or it is replaced by an audible alarm.

NOTE: The certification laboratory does not make determinations as to the color of light or brightness frequency (flash). In addition, other alternatives to alert the appropriate personnel will be considered in a case by case basis.

- 2.4.43. A mechanism, media or instrument that will enable the authorized personnel to adjust the volume (without entering the logic area) shall be provided. However, the maximum volume setting shall be such that at least

allow the alarm to be heard with the main door close, in typical gaming environment (volume controls assured within the logic area are exempt).

2.5. Cash acceptance systems

- 2.5.1. When notes or tickets are used, the machines must have cash storage boxes (stackers). These boxes shall be provided with at least one lock.
- 2.5.2. Slot machines should have a way to show that a bill (notes, tickets or similar media) have been accepted, and has been successfully added to the appropriate meters.

Ticket entry systems

- 2.4.44. Refer to Chapter 5, Specifications on the acceptance of tickets.

2.6. Communications

Communication interface

- 2.6.1. Slot machines must have the necessary hardware and software to link to a data network to perform online monitoring control and support.
- 2.6.2. Every interface device and communications port must properly be labeled in the operator manual according to their function.
- 2.6.3. Every physically interface device and communication port shall be physically located in a secured area to prevent non-authorized access to them or their connecting cables.

The slot machine should have the ability to communicate via two-way protocols (bidirectional), to provide an adequate level of error detection and recovery thereof.

- 2.6.4. The slot machine gambling should not allow any sensitive information (information for validation, personal identification number, credentials, secure seeds, keys, etc.) included in the communication to or from the Monitoring and Control Online System or other systems, may be visible through any display mechanism supported by the gaming device.

3. Software

This chapter covers the core requirements of the software used on slot machines.

3.1. Introduction

- 3.1.1 This section is designed only to cover software operations from the slot machines available for players and staff in the gaming hall.

Signature Algorithm (Hash)

To find out the hash or electronic signature of the critical software components, such as game software, operating system, pay tables, jurisdictional chip, etc., algorithms approved by the SCJ are used, which will be of public domain so that monitoring and

control can be done without dependence on any equipment or control instrument in particular.

However, the use of a proprietary verification tool from a certification laboratory will be permitted, provided that it complies to use an algorithm approved by the SCJ and a copy of this tool is released to SCJ, as well as its operating manual.

Certification Laboratories will request the authorization for this algorithm. For its possible approval, it must comply with the following:

- ❖ To be at least 128 bits (32 hexadecimal characters).
- ❖ To be of public domain.
- ❖ To be suitable to be used from a personal desktop computer or laptop.
- ❖ To have a known test vector to check its implementation.
- ❖ The outcome will not depend on the platform, equipment or instrument from which it was run.

NOTE: The SCJ may authorize the use of an algorithm that does not meet all the above requirements, upon request of the respective certification laboratory.

3.1.2 Hashing methods for software verification gaming equipment, firmware and program storage devices (PSD), officially approved by the enforcement of this technical standard, are SHA1 and MD5.

The testing laboratory, before approving the device, will evaluate the integrity verification method.

Where due to the nature of the storage device it will not be possible to calculate a hash or electronic signature, this situation must be communicated to the SCJ by the certification laboratory as part of the respective Certificate of Compliance, clearly explaining the reasons why this hash cannot be calculated and the alternative mechanism for the validation of the integrity of the information shall be explained properly also.

3.2. Memory

Critical memory content

3.2.1 The reason of the non-volatile critical memory to exist is to store all data to be considered vital for the continued operation of the slot machines. This includes, but is not limited to, the following:

- ❖ All electronic meter inside the slot machines;
- ❖ Current credits;
- ❖ Configuration of the slot machine or the game itself;
- ❖ Relevant information of the last 10 games, including the current game if completed (see Section 3.11, Last game recall);
- ❖ Software state (the last regular status the slot machine software had before interruption);

- ❖ Relevant information of the last 5 bills accepted and the last 5 printed tickets (see Section 3.6.7, Required ticket information)
- ❖ Gaming devices offering games with a variable number of free games, by base game, may satisfy this requirement by providing the ability to deploy the last 50 free games in addition to each base game.

Critical memory maintainance

- 3.2.2 All critical data must be stored by using a fault tolerant procedure.
- 3.2.3 The critical memory storage must be kept using a self-validation procedure, that allows errors to be identified and addressed. This procedure shall include algorithms or control tools.
- 3.2.4 Comprehensive checks of critical memory shall be conducted following the initiation of a game, but before deploying its outcome. It is recommended that critical memory is continuously monitored for corruptions. The procedure must detect faults with an extremely high level of accuracy.
- 3.2.5 Self- verification of the game program shall detect 99.99% of all possible failures, which is to say that should be used at least one cyclic redundancy check 32 bits (CRC 32) as verification algorithm for, among other type of storage device, EPROM, compact flash, hard drive, etc.

This section is not intended to preclude the use of alternative types of storage such as hard drives for critical data retention. Such alternative storage types are expected to keep the integrity of critical data in a consistent way with the requirements of this section, as it might be applicable to the specific storage technology implemented.

Unrecoverable critical memory

- 3.2.6 An unrecoverable corruption error in the memory will result in an error in NVRAM. This memory error should not be automatically deleted and will result in a shutdown condition (tilt) to facilitate the identification of the error and will cause the gaming device to cease its functions. The critical memory error implies that any external communication to the gaming devices ceases immediately.

Any non-volatile memory error condition (or any other critical memory), low battery of the non-volatile memory (for external batteries for non-volatile memories) or program error or incorrect authentication, must generate an error condition, cause the machine to freeze and communicate the situation to the Monitoring and Control System. These should not be able to be unlocked by floor staff as they are considered critical errors.

- 3.2.7 The NVRAM shall not be cleared automatically and will require a complete NVRAM cleaning process.

Noncritical RAM and locations for program storage devices (PSD)

3.2.8 It is not required to validate space in the RAM and PSD that is not considered critical to the safety of the machine (for example: ROM sound or video).

Running programs from secondary storage devices

3.2.9 It is preferred to run the programs from approved primary storage devices (EPROM, FLASH, etc.). However, if a program execution occurs from secondary storage device (for example: RAM), then the certification laboratory should review the following topics:

- ❖ Verification process when a program is loaded from a primary device to a secondary device;
- ❖ Validation process of the image in the secondary device against the contents of the primary storage device, when possible;
- ❖ The type of validation procedure used;
- ❖ The actions taken if the verification procedure detects an error;
- ❖ Actions on a processor reset, for example, whether it recreates or rechecks the contents of the secondary storage device program.

Verification of storage devices

3.2.10 Alterable storage devices must meet the following requirements:

- ❖ To have software that supports the detection mechanism for unauthorized modification and corrupt elements, in any access, and subsequently, prevent the execution or use of these elements. This must happen, at least, in the following cases:
 - ✓ When the CPU of the slot machine is restored;
 - ✓ The slot machine is started in Audit Mode; or
 - ✓ Authentication failure event, after the game has started, in which case the slot machine must enter an error condition and a relevant message shall be displayed. This error will require the intervention of floor staff and may not be possible to be cleaned until the game is authenticated properly or the storage device is replaced or fixed, and the machine memory has been deleted.

3.2.11 Alterable storage devices should employ a check mechanism for unused or unassigned areas of the alterable device for unintentional programs or data and review the structure of the device by verifying its integrity.

This method will prevent additional games on the slot machine if unexpected data or structural inconsistencies are found.

It should also employ a registration mechanism in the event that a control program is added, removed or altered. Such registration must include at least the last ten (10) device changes, and each record must have:

- a) Date and time of the action

- b) The identification of the affected component
- c) The reason for the modification and
- d) Any relevant information for validation.

NOTE: Alterable programs storage devices do not include alterable memory devices which have been configured considered as "read only" for a hardware or software method. This condition should be spelled out by the laboratory in the certificate as well as the shape of your configuration.

Unused memory space in program storage device

- 3.2.12 The integrity of the operation of the device shall be protected against wrong or accidental use of empty portions of the program storage device memory. The following paragraphs deal with the specific requirements applicable to specific types of storage device.

ROM storage device

- 3.2.13 It should record all unused ROM area with the inverse of the erased state, which for most of the EPROM is zero bits (00 hex), instead of a bit (FF hexadecimal). Certification laboratories will review other effective ways of protecting unused areas with programming techniques and will approve them, reporting the SCJ. Those devices, whose control programs reside in one or more EPROMs, must employ a mechanism for the verification of programs and data control.

WORM storage device (write once, read many)

- 3.2.14 A WORM (for example CD-ROM) shall be used as a program storage device or fixed data device, provided that only the current program or data required is to be recorded in the WORM.
- 3.2.15 The operating software or operating system must provide a integrity revision to verify that there are no additional or lost programs or records or data files on the WORM.
- 3.2.16 The ability to perform an integrity check must be present. Certification laboratories will validate the method of review and approve it, reporting the SCJ.
- 3.2.17 It can be kept in the WORM older versions of approved programs. However, it should be able to clearly identify which file belongs to which program version.
- ~~3.2.18 It shall be verified that the method of switching to a different version of the program, including a reversion to an older version, it is done in a way that does not generate damages the player as regards the balance of earned credits available to bet. Also, as a result of changing game version, it will not~~

~~be acceptable loss or any alteration of accounting information, while it is maintained in the slot machine and has not been completely transferred to the Monitoring and Control Online.~~

~~This does not apply in the case of game changing and deleting memory, provided that the meters have been updated in the System Monitoring and Control Online.~~

Revoked by Article 3.2.18 of Resolución Exenta N° 219-2019

Read/Write storage devices

- 3.2.19 A read/write storage device shall be record (for example, a disk) to be used to store program data or fixed data, so that only the program or fixed data required by the program are recorded on it.
- 3.2.20 The operating software must provide a method of integrity checking to verify that there are no additional or missing programs, or records/files of fixed data within the storage device.
- 3.2.21 The ability to perform an independent review of integrity of the device operational software, to verify that there are no additional or missing programs, or data records/files on the storage device shall exist. For example, attach and boot from an external floppy disk, which initiates a full search of hash and directory and all the storage space of the device. Certification laboratories will validate the method, review and approve it, reporting the SCJ.
- 3.2.22 All integrity checking methods must have the ability to identify files or records that are variable data and exclude them from the calculation of electronic signatures.
- 3.2.23 The method for loading programs into the storage medium (Eg transfer or downloading files from disk), must be approved. Certification laboratories will validate the method and the used storage device and approved it, reporting it to the SCJ.
- 3.2.24 He may maintain different versions of the same program approved in the storage medium. However, it should be able to clearly identify which files belong to which version of the program.
- 3.2.25 It must approve the method of changing to different versions of the program, including the reversion to old versions. Certification laboratories validate the method used and approved, reporting it to the SCJ.

Flash memory devices

Security Controls

- 3.2.26 If there is a recording capacity without removing the flash memory, the use of flash memory devices means additional security risks for some other forms of firmware, and, therefore this technology will only be accepted if there are adequate controls to prevent reading, deletion or unauthorized copy of the flash devices. Certification laboratories will validate the used controls, check and approve them, reporting to the SCJ.

Physical protection against modification

- 3.2.27 The flash memory device should be protected of any unauthorized modification, which will only be allowed once the relevant safety policies are met.
- 3.2.28 Using switches or jumpers or similar devices to enable, disable, delete or write on the flash memory will be allowed, only if there is a feedback signal to the software that enables to record the configuration position for the jumper, unless these jumpers are located within the logic area of the slot machines.
- 3.2.29 Any changes made on the contents of the flash memory device by methods including, but not limited to, deletion or writing content, should be reflected in the feed of the power signal from hardware to software of the slot machines.
- 3.2.30 Unauthorized access to the contents of the flash memory device by methods including, but not limited to, deletion and writing of the contents, must activate an event that must be recorded in the same way that the "door opening" event is saved. The event could not be cleaned unless it is under the control of the hardware and software of the slot machines. Certification laboratories will validate the use of other methodologies and approved them, reporting it to the SCJ.
- 3.2.31 Flash memory devices containing the control program will be allowed provided that it will be disabled the ability to "rewrite" or to "flash" the device, ex: recording line interrupted in the memory, while it is installed on the logic board. Certification Laboratories will validate the use of flash memory devices and approve, reporting it to the SCJ.

Downloading programs to memory devices

- 3.2.32 In this document there will not be included any regulations related to download of game programs to memory devices (hard disks, flash or other). These requirements will be covered by an additional standard, and while this does not happen, such programs may not be used in gambling casinos operating in Chile under Law No. 19,995.

As noted in paragraph 2.4.9 of these standards, the ability to download games from a local server, is regulated in Circular No. 38, dated September 2013, from SCJ, or any upcoming replacing, amending or developing it.

Program verification

3.2.33 The programming operation of the flash memory must be verified on each programmed bit, by comparing the program and controlled by the programming device. This check should be done before or after recording.

- a) Those programs not based on EPROM storage must meet the following requirements for program verification:
 - i. The software must provide a mechanism for detecting unauthorized and corrupt software from any access and, subsequently, prevent the execution or use of those elements by the gaming device.
 - ii. In the event of a failed authentication, after the game has been turned on, the game device should immediately enter into an error condition and display an appropriate error message. This error will require the floor staff participation to be cleaned and should not be deleted until the data is authenticated properly, following the participation of such personnel or after the device is replaced or fixed and the game memory is deleted.

NOTE: Verification mechanisms for the control program will be evaluated in a case by case basis and approved by the Regulator and the Certification Laboratory based on standard security practices in the industry.

- b) For writable devices, such as hard disks, the following requirements shall be met in addition to those listed in the previous section:
 - i. To have a mechanism to test non-used or unassigned areas from writable device by programs or unwanted data and test the integrity of the structure of the device. The mechanism must block the execution of games on the slot machine if unexpected data or structural inconsistencies are found.
 - ii. Use any mechanism to keep a record at any time that a control program component is added, removed, or altered in any alterable medium. The record must keep at least the last ten (10) modifications to the device and each record must show the date and time of the action, identification of the affected component, the reason of the modification and any relevant information for validation.

NOTE: The term "alterable device" does not consider those memory devices that have been defined as "read-only" either using software or hardware configuration.

Theoretical return to player percentage

3.2.34 The theoretical return to player percentage (theoretical percentage payout or return to player or RTP) should be at least 85%, calculated over the game cycle. To this end, all situations that are not optional for the player will be considered (Eg, free spins) and not those that are optional (Eg Double Up). In the event that it is a game that includes at least one pay table below 85% RTP, the certification laboratory must additionally certificate the respective jurisdictional chip that prevents these lower percentages to be programmed by the casino operator and thereby inform in this way in the issued certificate of compliance.

NOTE: The Laboratory will provide the minimum and maximum theoretical payout percentage for the game in the certificate, unless otherwise indicated. Additional external awards added to the game will require a new evaluation of the theoretical payout percentage, considering the value of the prize and other possible factors. The certification laboratory will reevaluate the theoretical payout percentage whether or when required.

3.2.35 The maximum individual award that is offered on each slot machine, which statistically will occur at least once in 100 million games, is defined. This shall not be applied to multiple accumulated awards and won in a single game, where the accumulate prize is not published. This regulation for odds is not to be applied neither to games that enable a player to win the top prize, multiple times, by a free games feature. This regulation shall apply to each bet that will win the top prize. If the maximum advertised prize can take place during a bonus or free game feature, the calculation of probabilities will include the odds of getting the bonus round being included the probabilities of achieving the top prize.

3.3. Meters

Virtual meter updating

3.3.1 A meter shall be updated when an event occurs. Meters shall be updated, which may be either by adding or increasing. The term "aggregate" indicates the use of the current value from memory, performing an arithmetic operation of sum and storing of the new value in the memory.

Player's credit meters

Decrement of the player's credit meter

3.3.2 When credits are wagered (for example, at the beginning of a game, or additional bets during a game), they should be immediately subtracted from the number of credits available on the player's credit meter.

Update of the player's credit meter

3.3.3 A game is considered completed when the final transfer to the player's credit meter finishes (if it is a win) or when all credits wagered have been lost. It is expected that the won amount is added to the player's credit meter at the time of the win or at the end the game.

If a bonus, feature or option game requires additional credits to be wagered and the game accumulates all winnings (from the activation of the feature and the option), on a temporary win meter (instead of directly on the player's credit meter), the game must:

- ❖ Provide a way where winnings on the temporary meter can be bet (via the credit meter player) to give a chance to instances where the player does not have enough balance on the player credit meter to complete the feature.
- ❖ Transfer all credits from the temporary meter to the player credit meter when the feature is finished.
- ❖ Do not exceed the maximum bet limit, if one is required.
- ❖ Provide the player an opportunity not to participate.

Update of prizes and jackpots on the player's credit meter

3.3.4 At the end of a game, the value of each prize must be added to the player's credit meter, except progressives. The progressive jackpots paid by the machine should be added to the player's credit meter only if:

- ❖ The player's credit meter is kept in Pesos, or
- ❖ The progressive meter is increased in rounded amounts of credits, or
- ❖ The jackpot is converted from Pesos to credits while being transferred to the player's credit meter, in a way that doesn't create confusion to the player (for example, by making an unrated statement "wins meter amount" and then rounds down when converting) or cause accounting imbalances.

Storage, size and internal rollover of meters

3.3.5 Meter values may be recorded either in decimal system (generally Binary Code Decimal, BCD) or binary system.

3.3.6 Size of the meters should be at least of eight (8) integer digits, regardless of the number of decimal digits to consider.

Modified by Resolución Exenta 289-2014

3.3.7 If the book value exceeds the maximum number, for example: 99999999, then the relevant meter will reset ("roll over") to 00000000 automatically.

Definition of virtual or soft meters

Master meters

3.3.8 The game program must include meters, which should be increased continuously and automatically, in units equal to the denomination of the

slot machine. Both in the case of a slot machine configured for multiple denominations and one configured in a single denomination, the information must be shown in Chilean Pesos (CLP). Soft meters must be of at least eight (8) integer digits, independent of the number of decimal digits that can consider. These meters will be kept in units equal to the denomination, or in Pesos. Meters of significant events will be at least eight (8) digits of length. However, it is not required to rollover automatically.

- 3.3.9 The name of meters can vary as long as they keep their functions in accordance with the above and can be understood clearly according to their function.
1. Total in. The slot machine should have a meter which accumulates the total value of all bets, whether they are done by inserting banknotes, tickets, downloaded credits, won credits or other means. This meter must:
 - a. Not include subsequent bets from intermediate wins accumulated during the game sequence, such as those acquired in "double up" games.
 - b. In the case of multiple games or multiple denominations/multiple games slot machines, this meter shall record the necessary information, based on a pay table, to calculate the weighted actual payment percentage. It must record the total accumulated by all games of the slot machine without the need for a meter "Total In" for each one.
 2. Total out. The slot machine must have a meter that accumulates the total value of all amounts paid directly by the slot machine as a result of winning bets, whether payment is made directly to the printer by issuing a ticket, directly to the player's credit meter or by any other means. This meter should not record amounts paid as a result of external bonus system.
 - ~~3. Banknotes accepted. The slot machine should have a meter which accumulates the total value of bills accepted. The slot machine should also have a specific meter for each denomination of bill accepted that records the number of accepted bills for each denomination.~~
 4. Ticket in - value. The slot machine must have a meter that accumulates the total value of all cashable tickets (money or representing a value in money) accepted by the slot machine.
 5. Ticket in - number. The slot machine should have a meter that accumulates the total number of cashable tickets (of money or a value representing money) accepted by a slot machine. If this value is not provided directly by the machine, it must be delivered by it to a validation or monitoring system.

6. Ticket out - value. The slot machine must have a meter that accumulates the total value of all cashable tickets (money or value representing money) issued by the slot machine.
7. Ticket out - number. The slot machine should have a meter that accumulates the total number of all cashable tickets (money or a value representing money) issued by a slot machine. If this value is not provided directly by the machine, it must be delivered by it to a validation or monitoring system.
8. Income transfer from a cashless account. The slot machine should have a meter which accumulates the total value of cashable credits (money or a value representing money) transferred electronically to the slot machine from a betting account using an external connection between the machine and a cashless betting system. To this end, the player can use a plastic card that stores or has the information to access to the available funds.
9. Collecting transfer to a cashless account. The slot machine should have a meter which accumulates the total value of cashable credits (money or a value representing money) transferred electronically from the slot machine to a betting account by an external connection between the machine and a cashless betting system. To this end, the player can use a plastic card that stores or has information to access to the available funds.
10. Large prizes hand paid by the floor staff. The slot machine must have a meter that accumulates the total value of all amounts hand paid by the floor staff due to a unique winning combination of the base game, which amount cannot be paid by the slot machine automatically, because of the win limit settings. This meter shall not include amounts paid as a result of an external bonus or progressive system. The large prizes that are manually entered (keyed) to the credit meter player should not increase this meter.
11. Credits collected by the player and paid by the floor staff. The slot machine must have a meter that accumulates the total value of all amounts manually paid by the floor staff due to cash collection initiated by a player, whose amount cannot be paid by the slot machine, by exceeding the physical capacity or by the maximum win limit settings.
12. Large progressive prizes manually paid by the floor staff. The slot machine must have a meter that accumulates the total value of all amounts paid by the floor staff as a result of progressive jackpots,

whose amounts cannot be paid by the slot machine automatically, because of the configuration of the maximum win limit settings. This meter must not include payments made as a result of an external bonus system.

13. Progressive prizes paid by the slot machine. The slot machine must have a meter that accumulates the total value of all amounts paid directly by the slot machines as a result of hitting a progressive jackpot. This meter should not include payments from an external bonus system.
14. Promotional ticket in - value. The slot machine should have a meter which accumulates the total value of all non-cashable promotional tickets accepted by the slot machine.
15. Promotional ticket in - number. The slot machine should have a meter that accumulates the total number of non-cashable promotional tickets accepted by the slot machine. If this value is not provided directly by the machine, it must be delivered by it to a validation or monitoring system.
16. Promotional ticket out - value. The slot machine should have a meter which accumulates the total value of all non-cashable promotional tickets issued by the slot machine.
17. Promotional ticket out - number. The slot machine should have a meter that accumulates the total amount of all non-cashable promotional tickets issued by the slot machine. If this value is not provided directly by the machine, it must be delivered by it to a validation or monitoring system.
18. Promotional credits electronically admitted. The slot machine must have a meter that accumulates the total value of non-cashable promotional credits electronically transferred to the slot machine from a promotional account using an external connection between the machine and a betting cashless system. To this end, the player can use a plastic card that stores or has information to access to the available funds.
19. Promotional credits electronically collected. The slot machine must have a meter that accumulates the total value of non-cashable promotional credits electronically transferred from the slot machine to a promotional account using an external connection between the machine and a cashless betting system. To this end, the player can use a plastic card that stores or has information to access to the available funds.

20. Non-cashable promotional credits bet. If there is such functionality, the slot machine must have a meter that accumulates the total value of non-cashable promotional credits that are wagered. This includes promotional credits electronically transferred to the machine as well as those coming from promotional tickets, so in this definition credits used by tickets and plastic cards are included.

~~21. External bonus payment paid by the slot machine. The slot machine should have a meter which accumulates the total value of additional amounts obtained as a result of an external bonus system and paid by the slot machine.~~

~~Revoked by Article No. 3.3.9 of Resolution Exenta N° 219-2019~~

~~22. External bonus payment paid manually by floor staff. The slot machine must have a meter that accumulates the total value of additional amounts obtained as a result of an external bonus system and paid by the floor staff.~~

~~Revoked by Article No. 3.3.9 of Resolution Exenta N° 219-2019~~

23. Games played. The machine must have meters that accumulate the total number of games played since the game initialization (erasing non-volatile memory).

~~24. External doors. The machine must have meters that accumulate the total number of times any external cabinet door that allows access to the locked logic area or cash compartment has been opened, counted since the last reset of the non-volatile memory.~~

~~Revoked by Article No. 3.3.9 of Resolution Exenta N° 219-2019~~

~~25. Door storage box or stacker. The slot machine should have a meter that accumulates the number of times the door storage cash box has been opened, counted since last reset of the nonvolatile memory.~~

~~Revoked by Article No. 3.3.9 of Resolution Exenta N° 219-2019~~

26. Progressive occurrence. The slot machine should have a meter indicating the number of times a progressive prize has been awarded. (This should be interpreted as a requirement for the controller, whether it is within the same slot machine, or corresponds to an external progressive controller, so that when the progressive function is configured, it must deliver the result of this occurrence meter for each existing progressive level).

NOTE: Any other meter shall be informed by the certification laboratory.

If the slot machine does not have any of the aforementioned meters, the Certification Laboratory must report this situation and its reason to the SCJ for it to determine whether the slot machine will be approved or not.

Notwithstanding the above, in case the slot machine gives a different name to any of the meters described above, the Certification Laboratory must inform SCJ what is the equivalent name for the meter that satisfies the requirements demanded for each meter in these standards.

3.3.10 Each slot machine must be equipped with the following non-cumulative meters:

1. Credits wagered. The slot machine must have a meter, visible from the front outside, known as wagered credits meter, which informs the player the total value of the amount wagered in a game or specific round of the slot machine.
2. Win meter. The slot machine must have a meter, visible from the front outside, known as win meter, which informs the player the total value of the amount won in the game or round just concluded in the slot machine. The value of each prize at the end of a game must be added to the player's credit meter, except manual payments. The value of all prizes awarded must be added to the player's credit meter, except manual payments.
3. Credits paid. The slot machine must have a meter, visible from the front outside of it, known as paid credit meter, which informs the player the total value of the latest collection done by him, wins paid directly by the slot machine, large hand paid done by the floor staff or credit collected by the player manually paid by the floor staff. This information should be always visible to the player unless there is an error condition or malfunction.
4. Credits available for betting meter. The slot machine must have a meter, visible from the front outside of it and labeled specifically as Credit Meter (Contador de Créditos in Spanish), that informs the player on the amount of credits or monetary value available for bets on the slot machine. Of the total credit available on each slot machine, promotional credits must be used first, and then the cashable credits.

NOTE: ~~If the machine randomly assigned to either a different the aforementioned meters name, the laboratory must inform the SCJ what is the name of the meter equivalent and satisfies the requirements of each preceding meter.~~

- 3.3.11 Each slot machine must have a meter that records the number of games played, which must be restarted at the initialization of the slot machine (clearing procedure for non-volatile memory).
- 3.3.12 Each slot machine must be equipped with a device, mechanism or method for retaining the total value of each of all meters required in paragraph 3.3.10 referred to non-cumulative meters, until the nonvolatile memory is cleared.
- 3.3.13 Soft meters for each slot machine must be accessible and readable without necessarily having to access to the interior of the slot machine and should be accessible only to an authorized person at the request of the user, via a secure procedure.
- 3.3.14 It will not be possible to change a setting that causes an obstruction to the accounting logic meters without performing a ram clear on the non-volatile memory. However, a change to the denomination will only be achieved by a safe method, including access to the locked logic area or other secure method, under the condition that it can be controlled by the regulator (for example based on key or personal identification number controls).

Progressive meters

- 3.3.15 Stand-alone progressive slot machines isolated, or with individual progressive, should include the following additional meters for each progressive jackpot offered:
- ❖ Current value: Value or current amount of the progressive jackpot
 - ❖ Hidden jackpot current value: Current value or amount of the hidden jackpot or reserve
 - ❖ Overflow jackpot current value: Value or current amount of overflow jackpot
 - ❖ Overflow: Value or current amount of jackpot overflow, which is the amount that exceeds the top value or limit set for the progressive
 - ❖ Hit: Number of hits or times the progressive was won
 - ❖ Won: Total value of awards for this progressive or a history of the last 25 progressive jackpots hit
 - ❖ Base: Start, base or initial value for the progressive
 - ❖ Limit: Limit or top value for the progressive (if there is a maximum value)
 - ❖ Increase: Value or percentage for progressive jackpot increase
 - ❖ Secondary increase: Value or percentage for secondary increase, proportion of increase for the progressive jackpot when the limit is reached, if that is applicable
 - ❖ Hidden increment: Value or percentage of hidden increase, proportion of increase for hidden progressive jackpot or reserve, only if applicable

- ❖ Restoration value: Value or amount to which the progressive will be restored after it is hit, if that is different base or initial value
- ❖ Slot machines linked to the jackpot

NOTE: Any changes to the amount of the progressive jackpot must comply with local internal control procedures.
The meter information can be displayed directly by the gaming device, in which case it is only accessible to authorized personnel.

Multi-Game meters

- 3.3.16 Consistent with detailed in 3.3.10 for non-cumulative meters, the following for each game in a multi-game setting must be specified:
- ❖ Played games: Total number of games played
 - ❖ Incoming credits
 - ❖ Outgoing credits

Meters labeling

- 3.3.17 All other statistics or electronic information must be properly labeled.

3.4. Disruption and Recovery Program

Recovering from a program interruption

- 3.4.1 After a program interruption (eg off), the software must be able to recover to the state it was immediately before the interruption occurred under the terms set out in section 2.3.63, Power failure.

Recovery from test mode

- 3.4.2 If running a test mode, any test that incorporates credits must completed entering or leaving the slot machine (eg ticket acceptance test) before restoring or resuming to normal operation. There will be no other way than the normal operation (ready to play) that can increase an electronic meter. Any credits on the slot machine that has been accumulated during the test mode, diagnostic or demo mode will automatically be deleted before exiting the mode. Specific meters are permissible for these types of modes provided the meters will indicate so.

Restoration from a fault condition

- 3.4.3 If a machine is turned off while gambling is under a fault condition, then upon power restoring, it should display a fault message and the slot machine must remain blocked. This applies unless a shutdown procedure is included as part of an error reset procedure or if by turning on or closing the door the slot machine checks the fault condition and detects that there is no longer the fault.

Procedures for program resumption

- 3.4.4 When the program resumes, the following procedures, as a minimum, must be performed:

- ❖ No communication with an external device shall be started until program resumption routine have successfully been completed, including self-tests;
- ❖ The manufacturer must clearly identify the "program resumption routine" in the product documentation submitted to the certification laboratory;
- ❖ Slot machine control programs shall run an auto-test searching for possible corruption due to failure of the program storage medium, using the algorithm specified in 3.2.5;
- ❖ The integrity of the whole critical memory shall be checked;
- ❖ The shutdown process must be tested in order to verify its correct ending and an appropriate message shall be displayed if an incorrect finishing is detected;
- ❖ The software must be able to detect any changes in the machine's gaming program since the moment the machine was power on or interrupted for the last time. If a change is detected, the machine will lock and display the relevant message until it is reset by an authorized person.
- ❖ The ticket verification device must perform a self-test each time it is turned on. In the case that the self-test fails, the bill acceptor shall automatically disable itself (for example, entering a state of ticket rejection) until the error condition has been cleared.

Program interruption during a game

3.4.5 When the slot machine is shut off while it is in a non-fault condition during a game (eg monitoring and control online system disables a slot machine in site), the current game must be finished (including any game free or double up feature) and allow the player to collect his credits.

3.5. Door Open / Door Close

Doors that will be monitored

- 3.5.1 The software must be able to detect access to the following doors or secure areas, if the device is connected to the power source:
- ❖ All external doors of the slot machines;
 - ❖ Logic area doors;
 - ❖ Bill acceptor doors;
 - ❖ Any additional area that houses a critical processor; Y
 - ❖ Communication boards or mechanical meters, if they are accessible without having to open any of the above listed doors.

Door opening procedures

- 3.5.2 The following procedures shall be performed to open any door:
- ❖ The complete software state must be stored before opening the door;
 - ❖ The game will cease to be played;
 - ❖ The machine enters an error condition;

- ❖ ~~The reels must stop to spin, at the minimum at the end of the current game in progress;~~
Revoked by Article 21 of Resolution Exenta N° 219
- ❖ Credit acceptance procedures must be deactivated (may be reactivated while a credit acceptance test);
- ❖ The slot machine must clearly indicate that the door has been opened and cannot continue the game play;
- ❖ Any player interaction that could affect the game in progress shall be disabled (unless it is used in door open mode or test mode);
- ❖ Any cash collection procedure shall be disabled; and
- ❖ An alarm will sound, or the upper indication light will flash, or both.

Door closing procedures

3.5.3 Except accessing the logic area, when all doors are closed the software will return to the condition it was before the occurrence of the first state of door opening. This means the following:

- ❖ It should display a message that indicates the door(s) has(ve) been closed. This may be for a predefined lapse of time, or until the next game is started;
- ❖ Any relevant player's income shall be reactivated;
- ❖ The alarm shall be turned off; and
- ❖ The game will return to its previous state just before the door opening.

Cashless incoming

3.5.4 Any machine that allows incoming money, transferred using a card, must have a safe method and has proven to be reliable. The certification laboratory will assess and approve, if applicable, the method used and notify it to the SCJ.

3.5.5 Cashless transfer to a slot machine will only be accepted when done when the machine is enabled to play. Other states such as fault conditions and audit mode, should disable cashless transfers.

3.6. Cashing or collecting credits

Terms for credit collection

3.6.1 Credits may be collected from the slot machines if the player pushes the designated collection or cash button at any time, unless:

- ❖ The game is in progress;
- ❖ While in audit mode;
- ❖ While there any open-door condition;
- ❖ While in test mode;
- ❖ While it is increasing the credit meter or win meter; unless, the full amount is recorded on the meters when the collect button is pressed,

- ❖ When the SMS has disabled the machine, if that is possible, as in such condition a hand pay must be generated and not allow the machine to pay; despite the provisions of 3.4.5, or
- ❖ While there is any fault condition, provided the error condition prevents a valid collection that is not supported by other means.

3.6.2 Credits can be cashed or collected from the slot machines, at the manufacturer's sole discretion, only if there is a failure in the ticket printing or paper jam error and to the extent that the manufacturer has implemented a different payment method.

Terms for payment of credits

3.6.3 If the designated collection or cash button is pushed and the balance of credits is higher than the top amount that the machine can automatically pay, then the software automatically will lock the machine and enter a standby condition. The software must remain in this condition until the credits are paid by an external authorized intervention and have been properly recorded.

Cashless payment

3.6.4 While applicable technical standards for cards or other devices that allow the transfer of money to and from the slot machines are not enforced, such transfers should be made using safe and reliable methods, which must meet the least the following requirements:

- ❖ To verify data transmitted and received using at least CRC 16;
- ❖ To have unique identifier for each card or device;
- ❖ To use of meters for collected and transferred amounts.

Certification laboratories will evaluate and approve, if appropriate, these methods, reporting it to the SCJ.

Printers

Ticket printing

3.6.5 Credit collection or credit cash will only be accepted by means of a ticket when the slot machine communicates with a ticket or TITO system that validates the printed tickets.

3.6.6 Slot machines that provide printed tickets as a form of credits redemption must do the following:

- ❖ Generate two identical copies of each printed ticket; a copy for the / the player (a) and another copy to be retained within the machine for auditing purposes, or
- ❖ Keep an electronic record of all the details set out in Section 3.6.7, Required information for tickets, for the last twenty-printed tickets and allow access to these information under the Audit Mode functionality.

Required information for tickets

- 3.6.7 Each ticket issued as valid money must include in Spanish language, at least the information set out in Circular No. 10 from April 2010, issued by Superintendencia of Casinos, and any provision replacing, amending and/or developing it; that is to say:
- ❖ Name of the venue.
 - ❖ Asset number of the slot machine.
 - ❖ Date (detailing the day, month and year) and hour of issue.
 - ❖ Ticket value in Chilean Pesos, written in numbers and letters.
 - ❖ Sequence number.
 - ❖ Validation number.
 - ❖ Barcode.
 - ❖ Term of validity and, optionally, expiration date of the ticket.
 - ❖ When printing a promotional ticket:
 - Statement indicating that it is a promotional ticket
 - Statement declaring that it is not a redeemable or cashable ticket

Ticket barcode

- 3.6.8 Any failure in reading the ticket bar codes or other forms of machine-readable markings shall be rejected.

3.7. Displays

User options

- 3.7.1 The artwork must show enough information to indicate the available options to the player.

Size of the player's credit meter

- 3.7.2 The player's credit meter must have enough digits to display at least the maximum possible large prize that could pay a slot machine (including double up, etc., but not including a hand paid large prize).

Meters on the game screen

- 3.7.3 Meters related to the player's rights (including credits wagered meter, win meter, credits paid meter and credits available for betting meter) shall be displayed on the game screen on credits or Chilean Pesos, in a format that is clearly visible and easily distinguishable for the player.

A display that alternates between Chilean Pesos and credits will be accepted, as long as both values are clearly visible and easily distinguishable.

In case of multi-denomination, which provides games with different credit values (for example, \$ 5, \$ 10), it will only be required that the Multi-game selection mode displays the player's credit meter in monetary units.

Display of large progressive jackpot

- 3.7.4 The display or display with progressive meters must display the current total progressive jackpot, in monetary value or credit (delay effects the monetary value may vary for progressive displays in different casinos when inter casinos or WAP systems operate.)

Notwithstanding the above, knowing that the polling cycle on the increments of the progressive jackpot is performed lagging behind what is happening in real time, the displayed value of the current amount of the progressive jackpot must be updated accurately and as often as possible, within a maximum time of 30 seconds, so to reflect reasonably well the current amount of the progressive jackpot. When a progressive prize is obtained, the display must indicate the precise value of the prize.

What stated above shall not be applicable to a mysterious bonus prize feature.

Additionally, for those game programs including a mysterious bonus feature, the game must show the maximum amount that potentially can be won by the player. If the minimum amount that can potentially be won is not shown, it is assumed that the value is zero (0). Both the minimum and the maximum amount should be shown for any prize of a mysterious bonus feature, if the way to win involves strategy or skill. This could include methods where the value of the pay table is used for the purpose of making decisions that could increase the return the player (for example, Video Poker).

Player's credit meter display

- 3.7.5 The player's credit meter must be displayed prominently in all modes, except audit mode, configuration mode, testing mode and if player is watching an informative display, such as a menu or help screen. While a game, within the features or second screen bonus (bonus games that take place on the same screen play), there is no need to display the current value of the player's credit meter, as long as the player is not required to make an additional bet in that feature.
- 3.7.6 In order to get a visual effect, it may be increased or decreased the values shown to the player (for example, wins and credits) up to the real meter value.
- 3.7.7 Other displays
- a) Payglass displays or video screens: The payglasses or video screens shall clearly identify and state the game rules and the prize that will be paid to the player when a winning combination occurs accurately.
 - b) The pay glass or video displays shall clearly indicate whether awards are designated in credits, cash or some other monetary unit.

- c) The slot machine will reflect any changes in the value of the prize, which may occur in the course of the play. This may be achieved by a display or digital display in a conspicuous place of the slot machine and the game must clearly state such changes in that display.
- d) All information of the pay tables, game rules and help information should be accessible to the player, before a bet is palced. This includes unique game features, extended play, free spins, double up, auto play, countdown clocks, transformations of symbols, and bonus prizes with community styles.
- e) The pay glass or video screens will not be certified if the information is incorrect.
- f) Upcoming profits. The game will not announce 'Upcoming Earnings', for example, "a triple pay is coming soon".
- g) Bonus feature information. Each game that offers features like free games must show the number of remaining games for each game.
- h) Multiple decks. Any game that uses multiple decks of cards must inform the player the number of decks of cards that are at stake.

Game outcome

3.7.8 In a slot machine it must displayed the following information, in Spanish language, to the player while the machine is available to make a bet:

- a) The current player's credit balance;
- b) The amount of the current bet. This information will only be displayed during the base game or if the player can add more credits to the bet during the game;
- c) All winning combinations possible, or otherwise they will be available as a menu option; or shall appear in the help screen;
- d) All win amounts for each possible winning combination, or otherwise, such information will be available as a menu or help screen;
- e) The amount won from the last completed game (until the next game starts or betting options are modified);
- f) Selected by the player options (for example, the amount wagered, played lines) of the last completed game (until the next game starts or a new selection is made);
- g) The denomination that is being played must be clearly shown.

Exceptionally, in the event that these texts are expressed in a language different to Spanish, such information shall be also included in Spanish language, either on labels affixed to the slot machine, or in a notebook, corresponding to a notebook or small book, which must be attached to the cabinet by some mechanism to ensure that it is visible, easily accessible to the player and difficult to remove. For exceptional cases, the laboratory must certify the translation of such information, thereby including them on the respective certificate.

3.7.9 Revoked

Revoked by Resolution Exenta N° 289, dated November 25th, 2014

Multiline games

Selected lines display

3.7.10 Regarding multiple lines or multiline games, the slot machine must clearly highlight both each individual line to be played as the credits bet it. This can be achieved, on the one hand showing the number of bet lines and on the other, allowing calculation of the bet per line, considering the number of lines played and the amount of the total bet.

Won lines display

3.7.11 Multiple lines or multiline games, the winning line(s) must be clearly visible to the player, drawing a line over the symbols on the winning line (s), blinking the winning symbols or, in general, highlighting the symbols or lines associated with the award. When there might be winnings in multiple lines, each winning line will be highlighted in alternatively. This does not apply in for electromechanical reels, except it is used any kind of technology that makes it possible to implement lines in a similar way to those used in video screens, such as a flashing taillight for each pay line.

Standby mode display

Display requirements for nonzero values in the player's credit meter

3.7.12 While the slot machine is in standby mode, if there are credits in the player's credit meter, the following should be kept in sight until the next game is started (Section 3.7.15 clarifies these requirements for multi-game slot machines):

- ❖ The total number of credits wagered in the last game;
- ❖ The latest stop positions of the reels, card values, etc. of the last game;
- ❖ The total number of credits won, and other great prizes, associated with the outcoming combination of the last game.

After the bet for the next game is placed:

- ❖ The total number of credits bet in the next game;
- ❖ The initial states of all cards, tables, reels, etc. for the next game;
- ❖ When the game allows it, the big prizes that can be won in the next game.

Display requirements after the player start collecting and a payment in credits is completed

3.7.13 If a credit payment is done after finishing the last game, the slot machine must display, until the beginning of the next game, the value of credits paid in Pesos or credits.

3.7.14 If more than one payment of credits is done after finishing the last game, the slot machine must display, until the beginning of the next game, the

value of the last credits paid in Pesos or credits, and the value of the last payment made.

Multi-game slot machines

- 3.7.15 Multi-game slot machines will have a game selection mode accessible from the standby mode, where section 3.7.12, Display requirements for nonzero values in the player's credit meter, is not required. For further information on the specifications regarding the requirements of multi-game slot machines and game selection mode, see Section **Error! No se encuentra el origen de la referencia.**, Multi-game slot machines.

Video display

Attraction mode

- 3.7.16 An attraction mode can be used, provided the information outlined in the previous section of these standards is displayed, "Standby mode display" after it finishes.

Paytable display

- 3.7.17 While the game is in progress (eg awaiting to initiate the double up feature), the pay table should not cover the display of the game in progress.

Touch screen

Calibration function

- 3.7.18 Touch-sensitive screens must have a software function for recalibration, unless the touchscreen is designed to not require recalibration ever.

Accuracy

- 3.7.19 Touch-sensitive screens should be accurate, so actions and user selections are interpreted correctly.

Icon buttons

- 3.7.20 Icon buttons on touch screen must be sufficiently separated to reduce the chances of selecting a wrong icon due to calibration failure or parallax errors.

Hidden contact points

- 3.7.21 There will be no hidden or undocumented buttons or touch points anywhere on the screen that may affect the game and/or impact the outcome thereof, except those specified in the game rules.

Power saving mode

Power Saving Mode activation conditions

- 3.7.22 The Power Saving Mode is an optional feature, but if available, will only be activated when there are no credits or malfunctions in the slot machine.

Power Saving Mode control

- 3.7.23 A technician should be able to enable or disable the Power Saving Mode using the Setup Mode or by the SCM system, if applicable.

Power Saving Mode exit

- 3.7.24 The slot machine will leave mode the Power Saving Mode and return to the normal display mode immediately after stop being in "standby" (if a manual power saving feature is not being used), either because it has pressed any button or the touch screen, or because cash or a card has been entered.

Shutting off components during Power Saving Mode

- 3.7.25 It should be shut off automatically, at least, the bill validator, while in the Power Saving Mode.

Power Saving Mode activated by hardware

Reels / mechanical wheels

Making a new spin after reactivation of the slot machine

- 3.7.26 A new spin of the reels must be automatically done controlled by the microprocessor (for example, reels step motors) to the last legally obtained outcome of a game, when re-entering the game mode (for example, the front door is open, power is restored, the audit mode was activated, or unblocking of an error condition occurred).

Reels rebound

- 3.7.27 It should be prevented the rebound or floating of reels every time each reel stops spinning.

Minimum spin of reels

- 3.7.28 Each reel controlled by a microprocessor, should complete at least one spin per game.

Active monitoring of the reel position

- 3.7.29 Each reel controlled by a microprocessor must be monitored in order to detect a malfunction, such as a reel jam or that it is not spinning freely. Also, it will be detected any attempt to manipulate the reel's final position.
- 3.7.30 The default reel position or game display immediately after restoration of the nonvolatile memory, should not be the jackpot in any selectable line. The default game display, upon entering play mode, will not either be the jackpot. This applies to the base game only and not any secondary bonus. This does not apply to secondary games or game tables selected after starting the game.

Reels spinning errors

- 3.7.31 The reel specific number should be identified in the error code. This must be detected under the following conditions:

- i. A condition of a des-index for whirling reels, affecting the outcome of the game;
- ii. In the reels final position, if the wrong position exceeds half the width of the smallest symbol excluding the blank spaces on the reel strip; and
- iii. The reels controlled by a microprocessor will be monitored for malfunction, such as a reel jammed or is not spinning freely or any attempt to manipulate its final position.

3.8. Using the game

Game rules

- 3.8.1 A game should follow a consistent set of rules and should not be diverted from them at any time. A change in the rules is a different game, even though variations in the maximum number of credits bet per game (and/or lines per game) are allowed. This requirement does not exclude games implementations with multiple parts or features and/or wagering if the rules are clear for the player.

Independence of events

- 3.8.2 Except as indicated by the rules of the game, events of chance within games must be independent of any other event in the game or any other event in the previous games.

Modifying a game

- 3.8.3 A game should not alter or modify the presentation of the symbols or artwork, except where animation is used during a game or as part of the game rules, which should be clearly described in the artwork, otherwise this will be considered a different game.

Starting a game

- 3.8.4 For a game to begin, the machine should not have any malfunction or fault condition, or being under any test, measurement, have an open door or be in lockdown mode. It is not considered for this purpose updating values in the hard meters.

Betting

- 3.8.5 Wagering credits will only come from the player's credit meter, which should be lowered at the start of a game or when additional bets are made during the game, according to the rules of the game.

Game Mode / Standby

- 3.8.6 A game begins when a player makes a bet irrevocably from the meter that is not part of any previous game.
- 3.8.7 Game cycle. A game is considered completed when the final transfer is made to the player's credit meter (if there is a win) or when all credits

wagered or won that have not been transferred to the credit meter player lost.

The following is considered as part of a game:

- ❖ Games activating a free game feature and any subsequent free game;
- ❖ "Second screen" bonus features;
- ❖ Games with player selection, such as draw poker or blackjack;
- ❖ Games where the rules allow to bet additional credits, for example payment for insurance in the blackjack;
- ❖ Second part of a two parts Bingo game; and
- ❖ Double up.

3.8.8 The period following the completion of a game and before the start of the next game is called "standby mode".

3.8.9 To be considered a slot machine is in standby, it must be verified the following:

- ❖ It has no key switch activated (for example: Access to Audit Mode);
- ❖ It has no open doors;
- ❖ It is not activated;
- ❖ It has no credit on the win meter to be transferred to the player's credit meter;
- ❖ It's touch screen or any button have not been activated; or
- ❖ It does not have a fault condition.

How to play

3.8.10 A slot machine must display in Spanish language the information stated in 3.7.8, Game outcome.

Starting a game

3.8.11 Except when auto-play is activated, the player must start a game by pressing a play or a bet button or by using any similar input device.

A game can be started using a different and separate activation of the player interface (eg, play button or touch screen) and the slot machine may not allow the player to dodge this requirement using a different interface (for example, pressing buttons or blocking the game buttons).

Game information

3.8.12 All the rules of the game that is about to start must be true and reliable and be written in Spanish language.

Exceptionally, in the event that these texts are expressed in a language different to Spanish, such information shall be also included in Spanish language, either on labels affixed to the slot machine, or in a notebook, corresponding to a notebook or small book, which must be attached to the

cabinet by some mechanism to ensure that it is visible, easily accessible to the player and difficult to remove. For exceptional cases, the laboratory must certify the translation of such information, thereby including them on the respective certificate.

Automatic start of a game

- 3.8.13 Automatic start of a game, after the credits have been accepted in the player's credit meter, will only be applied as long as the player has chosen this way of playing.

Skill games components

- 3.8.14 Any game in which the outcome depends solely on the physical skill of the player (eg hand-eye coordination) is prohibited.
- 3.8.15 Any game that involves a component of strategic skill (eg draw poker and blackjack), must meet the following requirements:
- ❖ The theoretical payback to the player following the optimal strategy should not be less than the minimum RTP of the game program;
 - ❖ When the game offers an automatic suggestion or strategic on which cards that keep, the theoretical payback for the player shall not be less than the minimum one calculated using the choices offered by such suggestions and strategies offered by the feature, or following the advices given by the software;
 - ❖ When a player is given an automatic suggestion to keep a card or any strategic recommendation, it must be fair and not misleading; and
 - ❖ The player must have the ability to override any automatic suggestion on what card to keep and reject any or all strategic recommendations made. The case where the automatic suggestion refers to obtaining the maximum prize is excepted.

Award determination

- 3.8.16 The way of determining the prize must:
- ❖ Be clearly specified on the external side of a device, or must be easily accessible to the player;
 - ❖ Be solely a consequence of the result of a random number generator or RNG based on a computer and/or electromechanical device in conjunction with the current pay table and the rules of the game; and
 - ❖ Be obtainable from combinations of set of symbols and/or a selected number (except for random big prizes).

Paytables

- 3.8.17 Requirements theoretical minimum percentage return to player shall at all times. The requirement of minimum percentage of 85% must be met at all times. The requirement of the minimum rate must be met when playing at the lowest end of a board nonlinear payment (ie, if a game is played continuously at the level of the minimum bet during the whole life cycle of

the game, and the percentage theoretical return is less than the minimum percentage, then the pay table is unacceptable). This example also extends to games such as Keno, which continuously playing any combination of posts / positions produce a theoretical return to player lower than the minimum rate.

Betting limit

3.8.18 You may apply a limit to the maximum bet a player can make from the credit meter, according to the rules of the game.

Win limits

3.8.19 All win limits must be accessible to the player and must meet the minimum mandatory RTP and probabilities.

Truncation of amounts won

3.8.20 Should not truncate large awards values in any individual game element or sequence of game elements (for example should not be truncated large individual awards won coincident or accumulated won sequences characteristics).

Notwithstanding the above said, it is accepted that it is stated as part of the game rules, the maximum amount of credits that the game can pay. In this case, any wins will be bounded to the maximum value.

Exiting from a mode

3.8.21 A game should not automatically leave a mode before it is completed, unless there is downtime time leap or insertion of credits.

Auto play or automatic play

3.8.22 Auto play or auto play is allowed.

Double up

3.8.23 The rules must specify whether there is a maximum of chances or times to Double Up consecutive in each game after a win. It may offer only the first attempt to Double Up once all other elements of the game have been completed. In addition, Double Up shall be the last element of a game.

In any case, the player must always have the chance to be able to leave the Double Up feature if desired, prior to the respective bet.

3.8.24 The choice of Double Up feature should have a 100 theoretical payback%.

3.8.25 If a Double Up is offered for the bonus games or features outcome, only credits that have not been transferred from the win meter to the player's credit meter can be bet.

- 3.8.26 It won't be possible to perform a Double Up on stand-alone progressives.
- 3.8.27 The Double Up bets could incorporate a variety of symbols, player selections, or alternatives to win.
- 3.8.28 A partial transfer of the credits won to the Double Up feature will be accepted (for example, Double Up of half bet); however, the amounts that were not wagered on the Double Up feature must be transferred to the player's credit meter:
- ❖ When the player selects a partial Double Up bet,
 - ❖ Immediately after the end of a Double Up, or
 - ❖ Immediately after the game ends.

Notwithstanding the above, each Double Up feature offered, there shall be sufficient meters to determine the percentage of the current return to the player of the feature, which must be increased accurately each time a Double Up is concluded, including all amounts wagered and won games during intermissions. If the slot machine does not provide accounting information on the Double Up feature, the slot machine must offer the ability to disable the feature.

Auto Double Up

- 3.8.29 If an auto Double Up is provided, it can only be enabled the automatic entry to the Double Up feature when coming from a win in a base game or finalizing a game feature. A player must have the ability to disable the Double Up feature at any time. Double Up if used, you must give the player an option to leave the Double Up feature without playing.

Suppression of residual credits

- 3.8.30 If there are residual credits, the manufacturer may provide a residual credits elimination feature or allow a credit payment or ticket printing to eliminate the residual credits or return the slot machine to its normal game (for example, leave the residual credits in the player's credit meter to be wagered).
- 3.8.31 If the credit payment option is implemented, the player should not be able to finalize the credit suspended mode and return to normal play, unless meters can properly record the payment.
- 3.8.32 Game credits suppression of residual credits should not contribute to a progressive jackpot feature.
- 3.8.33 If the removal of residual game credit feature is won, the amount won shall be:
- ❖ Automatically be paid to the player; or
 - ❖ Be added to the player's credit meter

- 3.8.34 If offered a feature for suppressing residual credits, relevant meters should be implemented.
- 3.8.35 All other relevant meters in the slot machines should properly be updated.
- 3.8.36 If the feature for suppression of residual credits is lost, all residual credits shall be removed from the player's credit meter.
- 3.8.37 If the residual credits are paid instead of betting, the slot machine must update the relevant meters (for example, the credit paid one) and the information of the last game.
- 3.8.38 The removal of residual game credit must pay back at least eighty-five percent (85%) and no more than 100% to the player.
- 3.8.39 It should be clearly indicated the options and current settings of a player, either through artistic illustrations of statistics, or electronically or by video display or screen. All these options should not be misleading.
- 3.8.40 If the game suppression of residual credits offers the player an option to end the game (eg select a hidden card), it must be also given the player the option to exit the feature for removal of residual credits and return to the previous mode.
- 3.8.41 It should not be possible to miss the removal of residual credits feature with any other game feature, for example Double Up.
- 3.8.42 If a multi-game slot machine offers a feature for suppression of residual credits, then this feature shall be considered as part of the game from which it was triggered or should be treated as a separate feature (for purposes of each individual game meter).
- 3.8.43 Last game's historical hold last will display the result of the suppression of residual credits feature or will have enough information (eg, updated meters) to calculate the result.

Objectives of fair play

- 3.8.44 Every game must be fair to the players in the sense that a game should not be designed to give a player fake expectation of better luck using a false representation of any event. Among other situations, games (and features within the games) shall not incorporate an illusion of control that can offer the players a choice that seems to give an opportunity to influence the outcome of a game using a skill, when this is not actually possible or when it has already been determined the outcome of the game. This will not be accepted unless it is clearly explained in the game rules.

Once that happens a process of random selection, the slot machine must:

- ❖ Show an accurate representation of this outcome by random selection (for example, should not indicate a misleadingly near miss or almost hit)
- ❖ Not perform a secondary decision affecting the result shown to the player

Flickering or color change on the cards in Double Up will not be considered an illusion of control.

- 3.8.45 Symbols in virtual reels (videos) shall be displayed in the same way as in reel strips. No manipulation or restructuring of reel symbols are allowed when symbols are shown to the player, if the purpose is to modify the actual outcome of the game.

Card games

- 3.8.46 Outcomes for games showing cards that are removed from a deck are the following:
- ❖ The selection of cards should be done from a deck that properly reflects the status of the cards removed earlier;
 - ❖ Cards removed should not be returned to the deck unless the game rules allow it;
 - ❖ No need to re-shuffle the deck unless the game rules permit it; and
 - ❖ As removing the cards from a deck, they must be used immediately, as indicated by the game rules (for example, cannot be discarded due to an adaptive behavior of the slot machine).

Games with withdrawals ballots

- 3.8.47 The results of the games involving the removal of ballots from a drum (eg Bingo) are as follows:
- ❖ At the beginning of each game, only the ballots applicable to that game can be shown. For games with bonus features and additional balls that are selected, they must be chosen from the original selection without duplicating a ball that has already been chosen;
 - ❖ Ballots once they are removed from the drum, they should not return to the drum unless the game rules stipulate it;
 - ❖ The drum will not be mixed again except where the game rules provides it; and
 - ❖ As the drum ballots are removed, they must be used immediately as stipulated in the rules (for example, they must not be discarded due to an adaptive behavior of slot machines).

Roulette, wheels, spinning reels, dice or coins games

- 3.8.48 The outcome of games that shows or involve either reel spinning (such as "slot machines"); wheels (such as roulette); rolling dices; tossing coins; using

a deck of cards or other similar illustrations, must meet the following requirements:

- ❖ For dice/coins/decks of cards, or similar apparatus described, the probability of any particular outcome display, should be proportional to the actual physical device (e.g., one in twenty for a reel or wheel twenty positions, a sixth for a six-sided dice, half for a coin, one on 38 for a roulette wheel that includes a zero (0) and a double zero (00), 1/52 for a deck of cards) unless otherwise specified in the rules of the game program;
- ❖ If reels or virtual wheels are used mapped to physical reels or wheels, each physical symbol must be mapped to virtual symbols of the same type.

Other games

- 3.8.49 Fair play goals for those other games such as horse/car/animal racings, golf/football virtual reality or other similar descriptions, will be evaluated case by case, applying objectives of general and fair play specified earlier in this document. Certification laboratories will evaluate and approve, if appropriate, these implementations, thereby notifying the SCJ.
- 3.8.50 Any game that has a sequence for conclusion should display the entire sequence. For example, a race shall deploy all the players who finished the race.

3.9. Audit Mode

Requirements for audit mode

- 3.9.1 Audit mode shall include at least the following items:
- ❖ A display of all information of the soft meters,
 - ❖ Deployment of the terminal identification (number of the slot machine);
 - ❖ Deployment of software identification or game;
 - ❖ Display of any other game statistics (for example, wins by category), if the slot machine have them and/or if those have not been transferred and are still being kept in the slot machine.
 - ❖ Deployment of event logs of the slot machine that are within the retention period thereof, including among others, significant events, at least in section 3.15, RAM Clear and communication lost situations.

Access to audit mode

- 3.9.2 Access to Audit Mode is limited to the operation of a key switch or other safety device or from within the interior of the slot machine cabinet.
- 3.9.3 The audit meter information should be accessible to an authorized person at any time, except during a game, a payment or a fault condition.

3.9.4 Slot machines should not be ready to play while in test mode or audit mode. If bills are inserted, they must be rejected (except during ticket validation test). The software will return to the immediately preceding state just before entering the Audit Test when this mode is exited.

3.9.5 It must be submitted to the authorize personnel the adequate information to instruct them on how to move between the different available screens in the audit mode. This includes access to all meters and access to all historical screens of the last game.

3.10. Test Mode/Diagnosis

Entry into Test Mode/Diagnosis

3.10.1 The Test Mode/Diagnosis will be access through proper instruction coming from the floor staff while accessing the Audit Mode.

3.10.2 Opening the front door of the cabinet slot machines should not grant automatic entry to Test Mode/Diagnostic. This mode should be initiated by means of an appropriate statement made by the floor staff, during an access to the Audit Mode.

Display during Test Mode/Diagnosis

3.10.3 During any test that incorporates the entry or exit of credits from the slot machines (for example, a ticket entry test), the machine must display a message on the screen that clearly indicates that it is in test mode.

Exiting Test Mode/Diagnosis

3.10.4 When the Test Mode/Diagnosis is exited, the game will return to the previous state it was in when it was right before entering the test mode.

Test games

3.10.5 If test games are implemented, the following must be considered:

- ❖ Shall not increase any meter (out of a temporary credit meter on the screen);
- ❖ Shall be available only after entering a specific game test mode within the door open mode; and
- ❖ The slot machine must clearly indicate that it is not in the normal game mode.
- ❖ There will be no other way than the normal operation (ready to play) that can increase an electronic meter. Any credits that have been accumulated on the slot machine during the test, diagnostic or demo mode, will automatically be deleted before exiting the mode. Specific meters are permissible for these types of modes provided the meters clearly indicated so.

Information required in test mode

3.10.6 The following information should be available in test mode if it is not available in audit mode:

- ❖ Revision number for the game software (and if applicable, base) in slot machines;
- ❖ Setup/configuration data; and
- ❖ Theoretical return to the player percentage (RTP).

Special test modes

Test mode for combination and prize

3.10.7 If a test mode for combination and prize is available, it should include at least the following conditions:

- ❖ Each stop position of all reels or outcomes of games must be selected, allowing any combination test.
- ❖ Other specific meters are permissible for these types of modes provided they so indicate it.

Income credits during test mode

3.10.8 Where there is the chance of getting credits while the door is open for any reason, including service mode, those credits should be automatically suspended when the door is closed, and they will not be credited to any meter.

3.10.9 Credits generated in Test Mode shall be clearly identified as such.

3.11. Last games recall

Required information for last game recall

3.11.1 All slot machines must have the ability to deploy the full data of the last 10 games. It shall be indicated the outcome of the game (or an equivalent representation, regardless of whether it is a win or loss), the intermediate steps of the game (such as bonus games, free games and sequence of doubling up credits), credits available, bets placed, paid credits, and credits collected. This information may be displayed in a graphical or text format. If a progressive prize is awarded, it will be enough to state that the prize was awarded and not display its value. Slot machines offering games with a variable number of intermediate steps per game, can satisfy this requirement by delivering the ability to deploy at least the last 50 intermediate steps of play, besides the outcome of it (or an equivalent representation), available credits before the game, credits bet, credits won, current credits and winning combinations.

3.12. Multi-game slot machines

Selecting a game or game program

3.12.1 It should be provided a game selection screen where the total amount of the player's credit balances in Pesos is shown (deployment of additional credits will be optional).

- 3.12.2 It should be clearly explained in the slot machine, in Spanish language, the methodology to be used by a player to select and discard a game and play on a multi-game slot machine.

Exceptionally, in the event that these texts are expressed in a language different to Spanish, such information shall be also included in Spanish language, either on labels affixed to the slot machine, or in a notebook, corresponding to a notebook or small book, which must be attached to the cabinet by some mechanism to ensure that it is visible, easily accessible to the player and difficult to remove. For exceptional cases, the laboratory must certify the translation of such information, thereby including them on the respective certificate.

- 3.12.3 The player shall be informed at the time of selection of the games, about the all available games.
- 3.12.4 When a game is selected from the game selection screen, the selected game may start with by default the minimum bet amount allowed for that game or either the bet placed by the player in the last game. However, the player will have the option to change the bet to any desired value among the possible ones, before starting the selected game.
- 3.12.5 The player must be aware always of what game was selected to play and what is being played.
- 3.12.6 There is no obligation to play a game from the fact that it has been given the player the option to learn the information of the game.
- 3.12.7 A new game could not be started before the current one has been completed and all relevant meters have been updated (including features, Double Up and other game options), unless the action of starting a new game ends the current one in an orderly manner.
- 3.12.8 The set of games offered to the player for selection or pay tables can only be changed using a secure method.
- 3.12.9 No changes will be allowed for the set of games offered to the player to be selected or pay tables, while there are credits on the player's credit meter or while a game is developing.

Configuring multi-game slot machines

- 3.12.10 The certification laboratory shall certify that all stored games in a slot machines' memory meet the technical requirements demanded herein.

3.13. Random Number Generator (RNG) and selection symbol

3.13.1 The certification laboratory, in the issued certificate, must explain the fact that the generating mechanism for the game outcomes is a random one.

It has established a reasonable differentiation between types of possible RNG to be found. Therefore, the RNG should be divided into two groups:

- ❖ Logic (those that are exclusively computer programs commonly used in slot machines) and
- ❖ Electromechanical (those based functionality in mechanical parts, normally used in electromechanical roulettes, for example).

It is clearly stated that a manufacturer will decide what kind of RNG to be used in its product. It is also possible to implement a combination between a logical and mechanical RNG.

General requirements applicable to all RNG

3.13.2 An RNG will have to meet the following properties:

- ❖ To be statistically independent in the way each random number generated by the RNG, will have the same statistical probability to be generated,
- ❖ Meet the desired random distribution,
- ❖ Be unpredictable, it is not feasible to predict the future outcome of the RNG, even if the algorithm and the result is known sequence,
- ❖ Not be repetitive (or seed or in the sequence of values generated), ensuring that the RNG does not reproduce an output stream that has already occurred before,
- ❖ Do not allow synchronization with another RNG implemented the same algorithm.

Additional requirements for a logical RNG

3.13.3 RNG implementation must comply with at least 95% confidence level, the following statistical criteria, where applicable:

- ❖ Chi-square test,
- ❖ Equi-distribution test (frequency)
- ❖ Test Range,
- ❖ Permutation test,
- ❖ Serial correlation test,
- ❖ Evidence in the Diehard battery created by Marsaglia

NOTE: The certification laboratory shall inform the SCJ where it is not possible to make any of these tests, explaining the reasons, and any additional tests carried out and those made to complement the assessment.

3.13.4 The algorithm used for the RNG should not depend on an external parameter, the amount of money wagered, or the player's strategy, except

for that parameter naturally needed, as it might be the result of a previous game.

- 3.13.5 The number of states of the RNG must be greater than the number of possible outcomes of the application for which the RNG is used.
- 3.13.6 RNG cycles in background shall be done in between games.
- 3.13.7 If for some reason the RNG background activity is interrupted (for example, in a power failure), the seed or the number previously generated for the RNG should be based on the value generated immediately before the interruption or by a test method from certification laboratory.
- 3.13.8 The initial seed of the RNG will be generated by an externally not controlled event.
- 3.13.9 The RNG should not have the same starting point, to ensure that it is not possible to have a possible synchronization between games. This means that for an RNG used in two identical sets, synchronization between the two should not be possible. Furthermore, in the case of multi-position slot machines, a single RNG must be used to determine the outcome of the game. This RNG could be localized either in one of the betting terminals or in a different one (usually called the central terminal).
- 3.13.10 When it is necessary to have random numbers in a smaller range than that delivered by the RNG, scaling is allowed. Scaling should be performed in such a way that it is ensured that all the numbers generated in the new range have the same probability of generation as provided in 3.13.4. If a number is chosen outside the required probability range, it can be discarded and replaced by a new random number selected.
- 3.13.11 The RNG must not be affected when the slot machine where it is located receives or transmits information to any linked system or remote machine through its ports or communication protocols.
- 3.13.12 In games such as card games or bingo, where values, once chosen, cannot be reused, as it happens with a bingo drum, the RNG must meet this requirement.
- 3.13.13 After selecting the game outcome, the slot machine will not make a variable secondary decision which may affect the result shown to the player. For example, the random number generator selects a result where the game ends in a losing. The game will not pick a kind of loss to be shown to the player and replace the original. This would eliminate the possibility of simulating a scenario of "near misses" (Near Miss) where the odds symbol

for the big prize of appearing on the pay line are limited but frequently appear above or below the pay line.

- 3.13.14 For game types (such as spinning reels or virtual video reels), unless otherwise stated in the pay glass, the mathematical probability of a symbol appearing in a position to outcome of any game, must be constant.

Unless otherwise stated in the pay glass or other display, when playing in the slot machine a game that is a simulation of a casino live game, such as Poker, Blackjack, Roulette, etc., the simulated game will have the same probabilities associated with the live game. For example, the probability of obtaining any particular number on the roulette that includes a zero (0) and a double zero (00), is 1 to 38; the probability of a specific figure in a reel or wheel of twenty positions is one of twenty; the odds of a flip of a coin, is a half; the probability of a number in a six-sided dice will be a sixth; and the odds of drawing a specific card in poker are the same as in the live game, this is 1/52.

Additional requirements for an electromechanical RNG

- 3.13.15 In order to analyze this type of RNG, it should be collected the necessary data to perform the tests described in section 3.13.16, by direct operation of the mechanism the governs the RNG.
- 3.13.16 The mechanism governing the generation of random numbers must comply with at least one confidence level of 95%, to the following statistical criteria:
- ❖ Chi-square test,
 - ❖ Equi-distribution test (frequency)
 - ❖ Test Range,
 - ❖ Serial correlation test.

NOTE: In the event that due to the nature of the electromechanical RNG it is not possible for the Certification Laboratory to verify the requirements set in this sections, the certifying body shall verify the RNG according to its own methodology, which should be described along with the results of its application in the respective certificate of compliance is issued.

- 3.13.17 The RNG must have the necessary mechanisms to ensure that each combination or possible permutation of the symbols or values used in the game to generate winning or losing outcomes, are available for their random selection at the start of each game, unless otherwise indicated in the game rules.
- 3.13.18 The mechanical elements that are part of the RNG mechanism should be made of high strength materials, so that they maintain their physical properties ensuring long life of the RNG. The manufacturer of the slot

machines has to state in the respective manual the expected life of each component, so that a preventive maintenance and monitoring can be performed.

- 3.13.19 Players should not be able to access, at any time, any mechanism or element that is part of the RNG.
- 3.13.20 The RNG will not be affected by external interference.
- 3.13.21 The RNG must not be affected when the slot machines where it is located receives or transmits information to any linked system or remote machine through its ports or communication protocols.
- 3.13.22 Systems for prevention and detection of malfunctioning conditions of the mechanical parts must be implemented. A warning or recommendation signal should be displayed each time a result is generated outside the rules of the game (for example, if there is more than one ball in the roulette wheel). Additionally, redundant procedures should be implemented to ensure the security of detection of the game's outcome.

3.14. Progressive functionality

Progressive equity

For a progressive to be equally fair to all players, the following principles must apply:

- 3.14.1 All players playing in a slot machines which has a progressive jackpot, must be able to win it accordingly with the rules of the game.
- 3.14.2 For linked progressive jackpots, the following conditions must be fulfilled:
 - a) If a progressive jackpot requires a minimum bet from a player to win it, the rule to this end should be easily applicable and be informed to the players as part of the game rules and/or in the slot machine's artwork.
 - b) Progressive jackpot rules should be clear, complete, easy to understand and accessible by all players who want to choose to play for the progressive jackpot. These should also be informed on the game rules and/or slot machine's artwork.
- 3.14.3 For multi-denomination linked progressives, the probability that the player wins the jackpot must be the same by adjusting the prize with a proportionality factor as per the denomination being used in the game.
- 3.14.4 The proportionality factor above stated should not change between slot machines or types of games played on the same bank (linked machines), and it should not be possible to modify this proportionality factor.
- 3.14.5 For multi-denomination linked progressives with jackpots that can be won with a bet lower than the maximum one, the probability of winning should

not depend on the amount wagered, so the probability of getting the jackpot should depend on the bet. Game programs that do not work in this way must clearly warn the player in help screens.

- 3.14.6 All progressive prizes won must be based on a random event.
- 3.14.7 All progressive jackpot winners should be determined by the slot machine as a result of an event-oriented game.
- 3.14.8 Game programs that operate in a slot machine must be handled properly, regarding the reconciliation of progressive and notification to the players, before, during and after restarting the progressive controller.

Progressive jackpot hit message

- 3.14.9 The slot machine must enter a condition that stops the normal operation, when a large progressive jackpot is won and it has to be hand paid by the floor staff for being a big amount, as stated in paragraph 3.3.9 of this Standards for Slot machines.
- 3.14.10 The progressive system or the slot machine must provide the following information when a progressive jackpot is won:
 - 1. Alarm or audible sound that indicates that the progressive jackpot has been won;
 - 2. Visual indication of obtaining the prize in the main screen or progressive display, unless all the information that is on display is available in all participating slot machines;
 - 3. Progressive jackpot won signal, sent to the Online Monitoring and Control System.
 - 4. The new progressive values should be updated and shown on the machine and/or main screen or display.
- 3.14.11 The message showing that the progressive jackpot has been hit must include the amount won.
- 3.14.12 Resetting the progressive values, for both large ones as for other types of progressive jackpots, will be governed by the provisions of paragraph 3.14.23, Progressive functionality, of this Standards for Slot Machines.

Updating and displaying the progressive

- 3.14.13 The progressive meter display must show the current total value of the progressive jackpot, in monetary value or credits (by lagging effects, the monetary value may vary in displays for progressive in different venues when inter-casinos systems or WAP are operated.)

Notwithstanding the above said, and as the polling cycle of increments in the progressive jackpot is carried out lagging behind what is happening in

real time, the displayed value of the current amount of the progressive jackpot must be updated accurately and as often as possible, within a maximum time of 30 seconds, so to reflect reasonably well the current value of the progressive jackpot. When a progressive prize is obtained, the screen or display must show the exact value of the prize.

- 3.14.14 The progressive screen or display must never show a lower amount than the base value of the progressive jackpot.
- 3.14.15 The progressive screen or display must never show a greater amount than the maximum value or limit value of the progressive, if a top value is set up or announced.
- 3.14.16 The progressive screen or display must never show a greater amount than the actual current value of the progressive jackpot.
- 3.14.17 When a linked progressive jackpot is won, and the winning slot machine, as it shall be, locks or blocks, the value of the progressive will appear either on progressive's screen or display of the winning slot machine, or in the meter that is on the main screen or display of the progressive, or both. If only the winning slot machine is locked and only the meter at the progressive's screen or display is available, it will display, alternately or simultaneously, the amount won and the restoration value of the jackpot progressive.
- 3.14.18 If more than a hit of a linked progressive jackpot may occur at the same approximate time, or if a second progressive jackpot is won before the first progressive jackpot is restored (provided both progressive jackpots exceeding the threshold hand payment), each winning slot machine must be locked and display the accurate progressive prize in their respective screens which shows the progressive game meter. The restored progressive jackpot value will appear on the display of the game's progressive meter of other slot machines in the same bank. If no displays are used with progressive meters in each slot machine, the main display of the linked progressive will display alternately, simultaneously or in sequence the amounts won on each winning machine and/or the restoration values of the progressive jackpots of the other machines on the same bank.
- 3.14.19 The linked progressive jackpot meter should be visible from each slot machine by means of a screen or display in the game program or in a raised display or screen.
- 3.14.20 If the progressive jackpot meter increments up to the maximum value that can be displayed, the meter will freeze and keep the maximum value until it is won by a player. This can be avoided by setting the limit or top of the progressive jackpot (see paragraph 3.7.1, Size of the player's credit meter) according to the digital screen or display limitations.

Progressive and signatures verification

3.14.21 It must be possible to verify the integrity of the controller's and any associated critical software used in a progressive system or to start the signature verification on a progressive controller by an external method. This integrity check will provide a means for inspections of software/logical support in casinos in order to identify and validate the program. Electronic signatures that can be used for this purpose should comply with the provisions of paragraph 3.1.2 of this Standard for Slot Machines.

Changing parameters of progressive Modification method

3.14.22 The method through which the values of the progressive parameters are modified or entered, must be secure.

The considered parameters are:

- ❖ Increment values;
- ❖ Increment of the reserve and overflow jackpots;
- ❖ Reset values; and
- ❖ Top values (if any).

Resetting the values of the progressive

3.14.23 The current progressive jackpot values, including overflow one, should have the capability to be set once for each RAM memory reset in configuration mode. The default will be reset values and it will not be allowed to play until the actual values are fixed to a value equal or greater than the default or accepted (or the defaults have been accepted).

NOTE: For purposes of the requirements for multi-site progressive or inter-casinos (WAP) progressive systems, provisions set on Circular No. 41, dated October 2013 of the Superintendence of Casinos, or any replacing, amending, developing and/or supplementing it, shall be met.

3.15. Events and failures in slot machines

3.15.1 An audible or visual alarm shall be used to give notice about the following significant events or failures of a slot machine,

- ❖ Front (main) door opening,
- ❖ Logic area door opening,
- ❖ RAM data errors or malfunctioning,
- ❖ ROM data errors or malfunctioning,
- ❖ RAM backup battery error or malfunctioning,
- ❖ Request for assistance,
- ❖ Payment of a largeprize. In this case, the slot machine will enter a blocked mode until the operator restarts using the correct procedure,
- ❖ Error in reel spinning,

- ❖ Printer jam,
- ❖ Printer error during the game.

These alarms must be issued without prejudice to the notifications that the slot machine should send the Online Monitoring and Control System and that it should be blocked and deploy a fault message or event of these occurrences.

- 3.15.2 These events or fault conditions could activate the light tower, if it is present.

4. Artwork

This chapter defines the mandatory minimum requirements for artwork.

4.1. Introduction

- 4.1.1 For purposes of this chapter, artwork shall be defined as any of the following, represented by an image, text or sound in Spanish language, present in the slot machine (except in the Audit and Test modes):

- ❖ Game rules;
- ❖ Paytable;
- ❖ Name of the game;
- ❖ Reels and symbols;
- ❖ Any other text or image;
- ❖ Any other visual component of the game (for example themes, multi-game panels, linked progressive panels, etc).

This includes, but is not limited to, whatever appears on the top panel, bottom panel, buttons, and area surrounding the display or video screen, and the video screen itself.

The definition of artwork includes every message in Spanish, image or sound that the player sees and not included in the instructions, rules or information on the range of prizes or that are not part of the deployment of the game. Accordingly, such messages, images or sounds are subject to the requirements of this chapter.

Exceptionally, in the event that these texts are expressed in a language different to Spanish, such information shall be also included in Spanish language, either on labels affixed to the slot machine, or in a notebook, corresponding to a notebook or small book, which must be attached to the cabinet by some mechanism to ensure that it is visible, easily accessible to the player and difficult to remove. For exceptional cases, the laboratory must certify the translation of such information, thereby including them on the respective certificate.

Notwithstanding the foregoing, exceptionally artwork that is not in Spanish, regarding the name of the game, reels and symbols are accepted.

- 4.1.2 This chapter refers to all forms of artistic artwork as defined in section 4.1.1. The combination of all relevant messages in Spanish that may appear anywhere in the artwork shall comply with the provisions of this chapter.

No information shall contain conflicting or ambiguous statements.

4.2. General

- 4.2.1 It will be the sole responsibility of the manufacturer, supplier and/or operator of the gaming equipment, to ensure strict and timely compliance with the Laws of copyright, intellectual property, trademarks, patents, names, registered designs or other of this nature that apply to such equipment being released from liability for any breach of this legislation both SCJ as the certification laboratory conducting the tests and relevant tests.

In the same way, the SCJ shall be exempt from liability for any damage caused to slot machines, systems or equipment during testing and essays to which they will be submitted, and to the Certification Laboratory equipment used for the above said tests and essays. Also, the SCJ shall be exempt from liability for damages caused to third product operating in a casino, who must bear the loss or damage thereto and any compensation to the manufacturer, supplier and/or operator of the gaming equipment for eventual damages, as appropriate.

- 4.2.2 Insofar as practicable, for the range of games offered in a slot machine, it must clearly and consistently use the same method to display the winning values for all games offered.

- 4.2.3 It should clearly outline the functions of all the physical or touch screen buttons, information that should be preferably located on each button and in Spanish language.

Exceptionally, in the event that these texts are expressed in a language different to Spanish, such information shall be also included in Spanish language, either on labels affixed to the slot machine, or in a notebook, corresponding to a notebook or small book, which must be attached to the cabinet by some mechanism to ensure that it is visible, easily accessible to the player and difficult to remove. For exceptional cases, the laboratory must certify the translation of such information, thereby including them on the respective certificate.

- 4.2.4 Artwork should not possess characteristics that might be indecent or offensive to the general public, or contrary to public morality or order, such as nudity, pornography or excessive drinking.

Instructions payable and game

4.2.5 All winning combinations and game rules that apply to the game in a slot machine, should be available at all times, even when it is at standby; the exception of this rule is for the currently game in play, unless the player needs to be provided with special instructions to continue the game.

4.2.6 Artwork should not contain any prize that is not covered by the pay table.

Messages

4.2.7 Every message to the player shall be written, at least in Spanish language.

Exceptionally, in the event that these texts are expressed in a language different to Spanish, such information shall be also included in Spanish language, either on labels affixed to the slot machine, or in a notebook, corresponding to a notebook or small book, which must be attached to the cabinet by some mechanism to ensure that it is visible, easily accessible to the player and difficult to remove. For exceptional cases, the laboratory must certify the translation of such information, thereby including them on the respective certificate.

4.2.8 **Revoked¹**.

4.2.9 It should be able to understand the minimum and maximum bets, or they shall be expressed in artwork.

4.2.10 The name of the game in progress must be visible to the player when the game starts.

Tokenization

4.2.11 It must be stated clearly the credit value in Chilean Pesos.

4.2.12 Games operating in credits rather than cash, shall have all references to credit prizes in credits and deploy the phrase "All wins are displayed in credits", except when the game grants a large progressive jackpot, in which case the phrase to show will be "All wins are show in credits except the progressive prizes".

4.3. Games using spinning reels

Prize distribution

Jackpot prize-symbol relation

4.3.1 Prices for each symbol winning combinations shall be located within an area that visually belongs to the symbol. This can be achieved by appropriate use of pigeonholed or framed.

¹ Revoked by Resolution Exenta N° 289-2014

Number of symbols required for a large prize

- 4.3.2 It shall indicate the number of symbols required to appear in the reels window display rollers so that a big prize can be won. These jackpot symbols should appear in the correct configuration to avoid any ambiguity about which prize corresponds to which number of symbols.

Shared pay tables

- 4.3.3 If more than one symbol shares the same pay table, these symbols shall be located within an area that visually belongs to the pay table. This can be achieved by proper use of framing or pigeonholed.

Scatters

- 4.3.4 Each scatter symbol must be identified at least once, as well as the prizes it grants.

Visual appearance of the symbols

- 4.3.5 It should be kept the same visual appearance of the symbols along the various artistic illustrations, except where there is an animation in progress. No symbol that may change the visual appearance during the animation process, so it can misrepresent other symbol in the game, may appear.

Substitution

Substitution symbols (Wilds)

- 4.3.6 It may implement the symbol substitution in several ways, depending on the design of the game and its associated rules. Despite the chosen substitution method, the specific, stand-alone, or in combination substitution rules should be explain clearly the functionality of a substitution symbol.
- 4.3.7 Artwork should indicate which symbols correspond to symbols substitution. If a symbol is a substitute symbol, artistic illustrations should indicate which winning combination and what symbol replaces the substitution symbol, and any other condition that might be applicable.

Winning combinations

Combinations and reels order

- 4.3.8 It should be displayed or leave understandable from artistic illustrations, in which order the symbols shall appear on the reels (or "combination") for a prize to be granted or for a feature to be triggered (according to the game rules).
- 4.3.9 It should clearly describe the combinations ("left to right", "in any direction", "right to left", etc.)

Features / bonuses

- 4.3.10 Artwork should indicate the combination or combinations that triggers features and bonus and all conditions that may occur to activate them.

- 4.3.11 Artwork shall explain the player the rules related to features or bonus, including jackpots and selection options available.

4.4. Bingo Games

4.4.1 This section is about games such as Bingo games, where numbered ballots are selected from a simulated cage or equivalent, and a player attempts to predict which form those ballots will be selected.

- ❖ The player must be able to view or Access, while there is no game in progress, a tabular display of the scorecard showing all winning results.
- ❖ It should explain any special rule that is outside the standard ones of for a Bingo game.
- ❖ It must be clearly displayed on the screen all the selections for the player.
- ❖ It must be clearly identified on the screen all ballots that were withdrawn.
- ❖ The game should highlight all withdrawn or extracted ballots that matches the player selections (eg "Hit").
- ❖ It must be clearly identified any special skill, if there is any.
- ❖ The screen should provide a clear indication of how many selections the player made and how many hits have occurred.
- ❖ It must be explained the rules to purchase additional game features, if there are any, as required.

4.5. Card games

4.5.1 This section covers the games involving the simulated deal of cards from decks.

General

- 4.5.2 The faces of the cards must clearly display the value of the respective card.
- 4.5.3 The faces of the cards should clearly identify its suite. The faces of all the cards of each suite must have the same color.
- 4.5.4 It must be able to distinguish wild from other cards.
- 4.5.5 The player will have to see, while there is no game in progress, a tabular display of the scorecard showing the hands and respective wins.

Poker

4.5.6 Artwork should provide a definition of the winning combinations that differ from the scope of the standard game of Poker. For example, Royal Flush without wild cards, four of a kind, "Jacks or Better", 4 number 2 (when the two numbers are wildcards), etc.

4.5.7 They should clearly explain the rules of the "wildcards". For example, if the jokers are wild cards or number two are wild cards.

4.5.8 It should clearly be explained all the special rules that differ from the common scope of a poker game.

Black Jack

4.5.9 The game rules, at an appropriate level that accurately reflect how to play the game, must be available for the player.

4.5.10 They should clearly explain insurance rules if they exist.

4.5.11 They should display the current total of all hands, including the one for the dealer, during and after each game. The term "Last" or equivalent shall be used to indicate a hand which has exceeded its total of 21.

4.5.12 They should clearly explain the rules of the dealer.

4.5.13 If a hand has been split in two, it shall be shown each hand (total points, winning or losses results, won amounts or meters, credits or amount wagered).

4.5.14 Options available to the player must be shown always, either on the slot machines artwork or screens.

4.6. Other games

4.6.1 When there are other games that do not correspond to any of the above categories, these should be reviewed case by case. These types of games must meet the general requirements outlined below and the appropriate requirements outlined in Section 4, Artwork, of this document.

Certification Laboratories shall determine whether they are random gambling games issuing a detailed report of the findings to the SCJ.

General

4.6.2 Once the game is started the game, the options the player can select must be deployed.

4.6.3 All prizes the game can grant, and their rules, must be available for viewing.

4.6.4 The amount of games won for each separate bet and the total number of games won, shall be displayed.

Roulette

4.6.5 If a standard roulette is simulated, the following rules shall apply:

- ❖ It must be labeled uniquely each "zero" used (for example "0", "00", "000").
- ❖ The simulated roulette wheel must have the same format as a standard casino wheel (including the colors of the pocket where the ball and the distribution of the numbers on the wheel).
- ❖ The scorecard or description of all bets and prizes must be accessible to the player while the game is not in progress.
- ❖ The method for selecting individual bets must be explained in artistic illustrations.
- ❖ It should be displayed on the screen the bet or bets that the player has already selected.
- ❖ The rotation of the simulated ball should end on a pocket that determines unambiguously the winning number.

Dice games

4.6.6 This section discusses standards for dice games.

- ❖ Each side must clearly show the number of points.
- ❖ The simulated dice shall have the same format given for the standard one (for example, 1 and 6, 2 and 5, 3 and 4 respectively on opposite sides).
- ❖ It should be displayed or leave clearly visible the outcome of each dice.
- ❖ There should be a description of each bet option in artistic illustrations.
- ❖ Artistic illustrations should always deploy all possible betting options.

Simulated races

4.6.7 Esta sección trata los juegos que poseen carreras simuladas con animales (por ejemplo, caballos), vehículos (por ejemplo, motocicletas), seres humanos (por ejemplo, carrera de 100 metros), etc.:

- ❖ All participants in a race must have one or more characteristics that make them appear uniquely (for example, a number, or color of a rider).
- ❖ The outcome of a race should be clear and should not lead to an inaccurate interpretation.
- ❖ If prizes combinations involving players who have not completed first will be paid, it should be clearly indicated on the display the order of participants that will be awarded (for example, result 8-4-7).
- ❖ Each position of significant result should be displayed at all occurrences of the last game.
- ❖ Artistic illustrations should clearly explain the rules of alternative betting options (eg, pool) and expected rewards.

4.7. Double or Nothing

4.7.1 The following clauses apply to all games that offer a Double or Nothing option. The most common use is "Double Up" where you look for a

multiplier of two (2), but you can also apply to other multipliers (for example, triple or nothing) or a selection of them.

Limits

4.7.2 Artistic illustrations should indicate the limit that the Double or Nothing feature awards to any particular game (if this applies) and the maximum available number of Double or Nothing attempts. If there is a written explanation indicating the maximum largest prize that can be won, then it shall be possible to win that prize.

Selection of multipliers

4.7.3 Once a player has selected a multiplier, it shall be clearly indicated which multiplier it is.

5. Ticket acceptance specifications

5.1. Bill validator's functional requirements

General

5.1.1 All acceptance devices that detect the ticket entrance and provide a method for enabling the slot machines software, must be available to interpret and act appropriately on both a valid entry and on an invalid one.

5.1.2 Acceptance devices must be electronic and should be set to ensure that only accept valid legal tender notes and reject all others.

5.1.3 All bills accepted must be deposited in a box or receptacle cash storage on the slot machine (stackers).

5.1.4 Tickets rejected by the acceptance system must be returned immediately outward of the slot machine.

5.1.5 The acceptance of bills, tickets or other notes approved for accreditation to the player's credit meter will only be possible when the slot machine is enabled to play. Other states, such as error conditions, including open doors, auditing modes and game mode, will cause the bill validator system to be disabled, except for the acceptance of credits during a game on machines that allow players to make bets for upcoming events (for example bets on horse races).

5.1.6 When the slot machine is enabled to play, accepted banknotes will generate an increase of corresponding credits meter ("incoming bills"). Other states of the slot machine, such as fault conditions and Audit Mode, must generate the deactivation of the bill validator, and when in test mode, acceptance of notes is not to increase the player's credit meter.

Disabling values banknotes

- 5.1.7 The bill validator must have a sensor indicating that the receptacle or cash storage box (stackers) is full. If this sensor is activated, an error message must display either on the slot machine or for the floor staff. Additionally, the bill validator should disable itself, but the game in progress can continue.
- 5.1.8 All bill handling devices shall provide means by which the slot machine's software can detect and/or logically deduce when a process is underway possible fraud. For example, identification of counterfeit notes (if possible), or a reverse ticket (if a reverse bill was physically possible).
- 5.1.9 The slot machine must be able to detect whether a banknote jam has occurred.
- 5.1.10 If a bill validator only accepts banknotes in a certain direction, position or orientation, then there should be clear instructions on artistic illustrations of slot machines indicating the players the correct way to introduce the bill into the validator. For these purposes, may be considered for example, a label with a graphic image placed near the entry point into the bill validator, without prejudice to other means to meet this requirement.
- 5.1.11 Under any circumstances it cannot be lose credits if tickets are entered while a game is in progress.
- 5.1.12 Slot machines should not record the credits as a result of an entry of a ticket until the ticket validly accepted cannot possible be removed from the validator.

Discrimination

- 5.1.13 It should not be possible to disable any features of the validation system and record counterfeit bills as valid.
- 5.1.14 Inserting a ticket cannot be interpreted in any way as if more than one ticket had been entered. For example, entering a \$ 10,000 cannot be interpreted by the slot machine as if they had entered two tickets \$ 5,000.

Physical access

- 5.1.15 It shall be safeguarded the access to components of the bill validator and the cash storage box or stacker by using a key lock. Both must have door opening and closing sensors.
- 5.1.16 Access to the cash storage area of the slot machines must be through dual level locks; the outer door to the logic area plus some other door or lock, before the cash storage box or stacker of the slot machine can be removed.

This lock must ensure a lid over the cash storage box of the slot machine, which should not be able to remove easily using physical force.

- 5.1.17 The slot machine, if configured for a ticket validation device, should not activate the bill validator if the cash storage box or stacker is missing or not present.

Slot machines with bill validators

Requirements

- 5.1.18 It requires for slot machines having a bill validator, to include several safety features.

Configuration options

- 5.1.19 It is allowed to slot machines to have way to enable or disable the operation of banknotes validation, by an action that is not available to the player, as for example, the Audit Mode or access to the cabinet of the slot machine. If the bill validator is to be disabled, the slot machine cannot be played, unless it has an alternative method of payment.

5.2. Hardware Requirements

Ticket entry system

- 5.2.1 The ticket entrance system must confer a protection against vandalism, abuse or fraudulent activity. As a guide, the following points shall be considered:
- ❖ The ability to prevent manipulation by insertion of objects into the entrance ticket;
 - ❖ The ability to easily prevent the modification of the ticket diverter from the outside of the slot machine, without leaving evidence of this physical modification of the device; and
 - ❖ The ability to deliver a ticket in the cash storage box or stacker of the slot machine.
- 5.2.2 The ducts assigned in which travel tickets and all associated management device, should be constructed solidly.
- 5.2.3 The duct assigned whereby bills or tickets travel, and its associated devices handling, must be designed to resist jams and do not damage its trajectory during insertion acceptance, deposit or expulsion of banknotes.
- 5.2.4 The cash storage box or stacker of the slot machines must be connected to the slot machines so that it cannot be easily removed by using physical force. It must be located internally within the slot machines.

Banknote dispensing system

- 5.2.5 Slot machines must not have ticket dispensers.

Communications and interconnection cables

- 5.2.6 All bill validators should communicate with the slot machine by means of a bidirectional protocol, so the ticket verification software and the machine can mutually communicate.
- 5.2.7 Interconnecting cables from the bill validator to the slot machines should not be exposed externally or be immediately accessible to unauthorized personnel.
- 5.2.8 If the patch cable is disconnected, the bill validator must be turn off.
- 5.2.9 All interconnection cables and/or plugs related to the bill validator must have some sort of mechanism for strength relief.

Accepted bills and tickets

- 5.2.10 The bill validator will only allow the acceptance of valid bills and tickets.

Bill validators factory set

- 5.2.11 If bill validators are designed to be set exclusively at the factory, you cannot access or perform maintenance or adjustments to these validators in the gambling halls, except the following:
- a) The selection of the desired acceptance for bills, tickets or other approved bank notes and their limits;
 - b) Changes in the certificate storage device control programs or downloads of certified programs for bill validator;
 - c) Bill validator settings for tolerance in accepting bills or notes of varying quality should not be allowed externally to the game. Adjustments to the level of tolerance may be allowed only with the existence of adequate security. This can be achieved through locks with keys, physical fixations in a switch or other acceptable methods approved in a case by case basis;
 - d) Maintenance, adjustment and repair procedures approved by factory; or
 - e) Options that set the direction or orientation of acceptance.

5.3. Software requirements

Fault conditions of the bill validator

- 5.3.1 Slot machines should monitor and act upon the following fault conditions and bill validator error:
- ❖ Access to tickets or opening of the receptacle or cash box storage (stackers) of the slot machines.
 - ❖ Removal of the stacker or cash box storage.
 - ❖ Bill jams.
 - ❖ Forced removal of validated tickets, if it is physically possible.
 - ❖ Bill acceptor's cable disconnection.
 - ❖ Stacker or storage box cash is full.

- ❖ The bill validator must be able to detect and notify the SMC if number of rejected bills is excessive.

Bill validator self-testing

- 5.3.2 Whether the signature requirement has to be met by a self-revision method, the bill validator supplier must provide evidence that a self-test was performed, and revision details have been conducted.
- 5.3.3 The bill validator should perform a self-test each time it is turned on. If it fails to pass the self-test, the bill validator will automatically disable itself (for example, entering a state of rejection of bill validation) until it has cleared the error status.

Alarm

- 5.3.4 An audible or visual alarm shall be generated and/or a signal will be sent to the Online Monitoring and Control System (SMC) if the slot machine experiences any of the following specific conditions of the bill validator (for volume audible alarm refer to section 2.4.42, in section Hardware):
- ❖ Reverse tickets, if it were physically possible reverse ticket;
 - ❖ Opening the outer door of the bill validator without authorization, if it were separated from the front door of the slot machine;
 - ❖ Opening the cabinet door or cash storage box of the bill validator; or
 - ❖ Disconnect the interconnect cable bill validator.

Tokenization

- 5.3.5 For all those slot machines supporting bill validators, it should apply the following requirements regarding tokenization:
- ❖ Each valid ticket inserted shall register the actual value of Chilean Pesos or the correct number of current credits. If registered directly as credits, the conversion rate should be clearly indicated on the slot machine; and
 - ❖ Slot machines shall ensure that all accepted notes correctly increase the player's balance (the slot machine or the account, whichever is applicable) and the relevant meters in all circumstances. This includes, but is not limited to, the cases of power failure, opening door, error, entry to Audit Mode or otherwise deactivating the slot machine.

Meters

Main meters

- 5.3.6 The slot machine having a bill validation device should keep enough meters to be able to report the following:
- ❖ The total monetary value of all notes accepted;
 - ❖ The total number of bills accepted;
 - ❖ The number of bills accepted by each denomination, and
 - ❖ The value of the last five bills accepted.

Bill validator data storage

5.3.7 Messages received for the insertion of bills from the bill validator within the memory of the machines, must be recorded and displayed immediately on the credit balance of the player. These messages should be kept stored and must meet the requirements of critical memory. The slot machine must be able to retrieve these messages after reset, specifically after a power failure, or partial corruption of nonvolatile memory.

Historical log for bills and tickets inserted

5.3.8 A slot machine using a bill validator will store in its memory and display the information specified in Section 5.3.6, Meters, about the last five (5) items accepted by the bill validator (ie, cash, tickets, etc.). The historical record log may be combined or maintained separately by item type. If combined, the type of item accepted will be registered with their respective date of entry into the validator.

6. Tournaments

6.1. Tournament definition

A tournament is an organized event that allows a player to enter a competitive game against other players.

6.2. Tournament programs

Each slot machine can be equipped with a certified program which allows for tournament play mode. Tournament option must be disabled to default mode. If the tournament is an option will be activated only if fulfilled the requirements of Circular 37, dated August 23rd, 2013 of the Superintendence, or any that modifies, amends, develops and/or supplements it.

6.3. Tournament hardware

The game will comply with the requirements of Chapter **¡Error! No se encuentra el origen de la referencia.**, Hardware of this document, where applicable.

6.4. Tournament software

6.4.1 No slot machine, while enabled for tournament games, may accept credits from any source, or may pay claims in any way; it can only use credit points. Tournament credits have no cash value. These games will not increase any mechanical or electromechanical meter unless these meters are designed exclusively to be used with tournament software, and not will communicate any accounting information related with the tournament to the SMC. The payback requirements, as indicated in Section 3.2.34, Theoretical return to player percentage, are exempt from the requirement for tournament games.

6.4.2 All machines used in a single tournament will use the same game programs and configurations for the machine and game programs, as the other machines involved in the tournament, including the reel speed settings.