



Technical Standards for Progressive Systems

**Chilean Superintendency of Gambling
Casinos (SCJ)**

CHILE

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Modifications to the Technical Standards for Progressive Systems

The Technical Standards for Progressive Systems were approved by Resolución Exenta (Exempt Resolution) No. 623, dated December 27th, 2013, of the Superintendencia de Casinos de Juego - SCJ (Chilean Superintendency of Gambling Casinos), and have been modified by:

1. Resolución Exenta 84-2014 of the SCJ, dated April 1st, 2014.
2. Resolución Exenta 127-2014 of the SCJ, dated June 16th.
3. Resolución Exenta 289-2014 of the SCJ, dated November 25th.
4. Resolución Exenta 52-2015, of the SCJ, dated March 20th.

1. Introduction

1.1. Purpose

The purpose of this document is to define the key requirements for progressive systems or progressive jackpots, for its operation in the Republic of Chile.

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

1.2. Objective and principles

The objective of this document is to set sufficient requirements and controls for the progressive system as to be:

1. Fair,
2. Harmless,
3. Safe,
4. Reliable,
5. Auditable.

The principles governing the production and use of this standard are:

1. Alternative implementations for the specifications included in this document will be considered on a case-by-case basis.
2. All hardware and software must work in accordance with the requirements of this document, and with those corresponding to the manufacturer's design and specifications.
3. Progressive systems must not cheat, mislead or disadvantage players and must not endanger them or authorized personnel.

2. Definitions for progressive systems

2.1. Progressive or combinatorial progressive

It is a system where a combinatorial progressive prize is given, which is activated by a specific combination of symbols of the game program available in a slot machine, which is displayed for the players; ex. Five equal symbols, where this type of prize is triggered according to the rules of the game (combination of winning symbols).

2.2. Progressive award

The prize is progressive when it increases as a result of the percentage of increment coming from the bets made by the players. That is, from the contributions of the bets made by the players, plus the base amount configured in the game program by the operator.

2.3. Stand-alone progressives and linked progressives

If a specific progressive can only be won in a single slot machine, it is a stand-alone progressive or individual progressive; all other progressives are considered interconnected or also called linked progressive.

2.4. Local area progressives local and wide area progressives

A local progressive is a linked progressive where two or more slot machines that are in the same gaming casino are interconnected.

The wide-area progressive (WAP) or inter-casinos progressive system is an interconnected progressive system that links slot machines that are placed in more

than one gambling casino. For the purposes of this type of system, the provisions of Circular 41, dated October 18th, 2013 of this Superintendency, or the regulations that substitute, amend, develop and/or complement it, must be followed.

For the purposes of this standard, unless otherwise specified, it will be understood as interconnected or linked progressive either of both categories of progressive.

2.5. Progressive controller or progressive management system

2.5.1. A progressive controller is all physical (hardware) and logical (software) support that controls all communications between devices. The controller calculates the values of the progressive values and displays the information within the link of the participants machines and the associated progressive meter (the progressive controllers could be internally controlled by the game control program of the game program and/or by the Online Monitoring and Control System (SMC). A progressive controller may be comprised of more than one dedicated component and includes, but is not limited to, computers, cabling, interface boards, collection nodes, etc.

2.5.2. For linked progressives using progressive controllers, all linked game programs installed in each of the slot machines connected to the progressive, must meet the following criteria:

- a. Require a secure method to configure each game program in the link;
- b. Changes to progressive prize adjustments may not be made, unless by using a secure method;
- c. Each linked game program must be identified individually and independently;
- d. In case the progressive controller is part of the game program, only one game program in the link will play the role of the main progressive controller;
- e. If the game program configured as the main controller becomes inoperative, all games in the link must be disabled;
- f. If any game program on the link loses communication with the main controller, that game must be disabled;
- g. The progressive link must be capable of displaying all the progressive parameters (that is, contribution, number of levels, base values, etc.).

NOTE: The Certification Laboratory should evaluate and approve, if appropriate, the safe method used, as stated in paragraphs a) and b) above and report it to the SCJ.

3. Progressive functionality

3.1. Equity of the progressives

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

3.1.1. All players who play in slot machines that offer progressive prizes must be able to win the progressive according to the rules of the game.

3.1.2. For interconnected progressive prizes, the following must be met:

- a. If for winning a progressive prize it is require a minimum bet value, the rule regarding such value must be easily applicable and informed to the players in the game rules and/or slot machine's artwork.

- b. The rules of the progressive prize must be clear, complete, easy to understand and accessible by all players who want to choose to play for the progressive prize. Likewise, they must be informed in the game rules and/or slot machine's artwork.
- 3.1.3. For multi-denomination interconnected progressives, the probability that the player wins the progressive prize must be the same, adjusting the prize with a proportionality factor according to the denomination played.
- 3.1.4. The proportionality factor already specified should not change among types of slot machines or games played on the same interconnected machines, and there should not be the possibility of modifying the proportionality factor.
- 3.1.5. For multi-denomination linked progressive gaming programs where it is possible to win progressive jackpots with bets less than the maximum bet, the probability of winning should not depend on the bet amount, so the probability of winning the progressive prize should not change with regarding the bet placed. For game programs that do not work in this way, there shall be a clear warning of this regards on the help screens.
- 3.1.6. All progressive prizes won must be based on a random event basis.
- 3.1.7. All winners of progressive prizes must be determined by the slot machine as a result of a game-oriented event.
- ~~3.1.8. Every slot machine that participates in an interconnected progressive must inform the public about this condition, using the screen and/or slot machine's artwork.~~

~~If this condition has been disabled, then an error condition should alert the player and the Online Monitoring and Control System.~~

~~In exceptional cases where it is not possible to comply with the previous requirement, the Laboratory must evaluate and approve an alternative mechanism and report it to the Superintendency of Gambling Casinos (SCJ).~~

~~Revoked by Article N° 3.1.8 revoked by Resolución Exenta N° 219~~

- 3.1.9. The gaming programs that are operated on a slot machine must be handled accordingly with respect to the conciliation of the progressive and the notification to the players, before, during and after the restart of the progressive controller.

3.2. Notification of obtaining the progressive prize

- 3.2.1. The slot machine must enter into a condition that disables its normal operation, when a large progressive jackpot is hit and it has to be paid manually by the floor staff, as stated in numeral 3.3.9 of the Technical Standards for Slot Machines.
- 3.2.2. The progressive system, or the slot machine, must provide the following indications when a progressive jackpot is hit:

1. Alarm or audible sound that indicates the awarding of the progressive prize;
 2. Visual indication of the amount won in the main display or screen of the progressive, unless all the information that is on the display is available in all the participating slot machines;
 3. Winning progressive prize signal, sent to the Online Monitoring and Control System.
 4. The new progressive values must be updated and displayed on the machine and/or on the main display or screen.
- 3.2.3. The message communicating that the progressive prize was won must include the amount of the prize.
- 3.2.4. **Revoked¹**
- 3.2.5. The restoration of progressive amounts, both for large prizes and for all types of progressive prizes, shall be governed by the provisions of numeral 3.14.2 on restoring the amounts of the progressive, as stated in the Technical Standards for Slot Machines

3.3. Progressive update and visualization

- 3.3.1. The screen or display showing the progressive meters must show the current total of the progressive jackpot, in monetary value or credits (due to effects of delay, the monetary value can vary in the progressive exhibitions of different gambling casinos, when operating inter casinos systems or WAP).

Notwithstanding the foregoing, given that the polling cycle of the increments of the progressive jackpot is carried out with delay with respect to what is happening in real time, the displayed value of the current amount of the progressive prize must be updated with precision and as often as possible, within a maximum time of 30 seconds, so as to reasonably reflect the current value of the progressive prize pool. When a progressive prize is hit, the display or screen must indicate the precise value of the prize won.

- 3.3.2. The progressive's screen or display must never show an amount smaller than the base value of the progressive jackpot.
- 3.3.3. The progressive's screen or display should never show an amount greater than the maximum value or limit value of the progressive, if a maximum is established or announced.
- 3.3.4. The progressive display or display must never show an amount greater than the actual value of the progressive jackpot.
- 3.3.5. When an interconnected progressive prize is won and the winning slot machine, as configured, is locked or blocked, the amount of the progressive will appear either on the screen or progressive display of the game in the winning slot machine or the meter that is on the main display

¹ By Resolución Exenta N° 52, dated March 20th, 2015, of SCJ.

or screen of the progressive, or both. If only the winning machine is locked and only the progressive meter of the display or main display is available, alternately or simultaneously, the amount won and the amount of available restoration, will be shown there.

- 3.3.6. If more than one progressive prize is won in a progressive interconnection at the same approximate time, or if a second progressive prize is won before the first progressive prize is restored (as long as both progressive prizes exceed the hand payment threshold), each winning slot machine must be locked and display the correct progressive prize in its respective display that shows the progressive meter of the game. The restored progressive prize will appear on the display with the progressive game meter of the other machines of the same interconnection. If displays with progressive game meters are not used in each slot machine, the main display of interconnection of the progressive will display alternately, simultaneously or sequentially the progressive prizes of the winning machines and/or the progressive prizes of restoration of the other slot machines in the same interconnection.
- 3.3.7. ~~If any linked progressive or stand alone progressives do not have the ability to display or show the progressive in a gaming casino (that is, if all progressive prize display devices or screens are not operating) the progressive must be blocked and/or communicate this situation to the player in the display or screen.~~
Revoke by Article N°. 3.3.7 from Resolución Exenta N°. 219
- 3.3.8. The interconnected progressive prize meter must be visible from each slot machine, by means of a display or screen in the game program or a raised display (signage).
- 3.3.9. If the progressive meter (s) reach (es) its maximum display value according to the digital limitations of the screen or display, the meter shall be stopped 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 prize (see section 3.7.1, Progressive).

3.4. Verification of signatures and progressives

- 3.4.1. It should be possible to verify the integrity of the controller software and any associated critical software, used within a progressive system or to initiate the signature verification of a progressive controller by means of an external method. This integrity check will provide a means for software/logical support inspections at gambling casinos for the purpose of identifying and validating the program. The electronic signatures susceptible to be used for these purposes must comply with the provisions of paragraph 3.1 of the Technical Standards for Slot Machines.

3.5. Special cases of progressive systems

- 3.5.1. A progressive system must properly handle the following special cases of slot machines:
1. Restoration of non-volatile memory or random-access memory (RAM) of slot machines;
 2. Removal of the progressive machine from the interconnection

3.6. Progressive system communications

3.6.1. Unless the SCJ approves a standard with a different aim, all communications in the progressive system must use a bi-directional communications protocol, with adequate error detection and retrieval mechanisms.

3.6.2. Every important communication between the slot machines and the administration system of the progressive, such as the notification of winning the progressive and the payment, must be encrypted. As a minimum, all external communication to the physical security of the slot machines and auxiliary equipment and to the progressive system must be safe.

The use of secure proprietary communication protocols will be allowed, which should at least authenticate the data and allow encrypting those critical data communications that are not secured by this protocol.

3.6.3. For inter-casinos or wide area progressives (WAP), the information and/or communication between the different venues must be through encryption. Said encryption method must include the use of different "keys" or "seeds" of encryption that can be changed in real time.

3.6.4. The progressive system can support the ability to transmit all progressive and progressive jackpot configuration information to the Online Monitoring and Control System (SMC) in accordance with the standards demanded by the SCJ for Online Monitoring and Control System referred to the auxiliary systems that can be connected to the SMC.

The certificate issued by a Certifying Entity must expressly indicate the protocols used by the progressive controller.

3.7. Progressive metering

3.7.1. The slot machine where the driver or external controller of the progressive is host, must have the ability to display, print and transmit, upon request, the following minimum configuration information:

1. Base or initial value of the progressive;
2. Maximum progressive value: progressive limit value (if there is a maximum one);
3. Value or percentage of the increment of the progressive jackpot;
4. Restoration value or amount to which the progressive will be restored after it is obtained, in case it is different from the base or initial value;
5. Value or percentage of the secondary increment, proportion of the increase of the progressive jackpot when the limit is reached, if applicable;
6. Value or percentage of the hidden increment, proportion of the progressive increase for the hidden jackpot or reserve jackpot, only if applicable.

The foregoing is without prejudice to the meters that are required in section 3.3.15 for the progressive machines of the Technical Standards for Slot Machines.

- 3.7.2. The slot machine where the controller or external controller of the progressive is host must have the ability to display, print and/or transmit, upon request, the following minimum metering information:
1. Value or current amount of each progressive jackpot;
 2. Current value of the hidden or reserve jackpot;
 3. Value or current amount of the overflow jackpot, amount that exceeds the top or limit;
 4. Hits to the jackpot or number of times in which the progressive was won;
 5. Win value, total value of prizes won for this progressive or a log of the last 25 progressive prizes won;
 6. Restoration value or amount to which the progressive will be restored after it is won, in case it is different from the base or initial value;
 7. The participating slot machines in the progressive jackpot.

The certificate issued by a Certifying Entity must expressly indicate the existence or not of each of these jackpots.

3.8. Progressive parameter storage

- 3.8.1. Before starting its operation, the progressive systems' control programs will test themselves to detect possible corruption due to failures of the program storage media.
- 3.8.2. In progressive systems, all required increment meters must be stored, using a fault-tolerant method, and in the case of interconnected progressives, this method should allow the recovery of the current value of the progressive amounts when faults occur in a progressive controller.

3.9. Hardware requirements

- 3.9.1. Each progressive controller will be housed in a secure environment with authorized access.
- 3.9.2. Any progressive controller used shall comply with all relevant specifications for electromagnetic interference (EMI), electromagnetic compatibility (EMC) and applicable safety specifications contained in numeral 2.3 of the Technical Standards for Slot Machines, where applicable.
- 3.9.3. The wide area progressive systems (WAP) must have the capacity to store all the critical information, using a method that avoids its loss due to a failure in a single point.
- 3.9.4. Wide area progressive (WAP) systems must have the ability to perform periodic backups.

3.10. Handling error conditions of the progressive system

- 3.10.1. After an interruption in the execution of the game program (for example, due to an electrical power failure), the software must be able to recover to the immediately state prior to the interruption.

- 3.10.2. When an error occurs in a progressive system or controller thereof that affects its normal operation to monitor security events, record game activities and monitor progressive signals, the system must display an appropriate error message or transmit it as a warning to the designated departments of the casino operator.

For wide area progressives (WAP), it should be possible to monitor the meter readings and the error events of each device independently of the SMC.

- 3.10.3. If any of the following errors occur, the progressive controller must transmit the appropriate signal to disable the game programs that are using the progressive, displaying an error message on the screen or display with the progressive meter:

- a. Communication failure between the game and the controller or anywhere within the progressive controller system;
- b. Multiple communication errors;
- c. Failure in a checksum or a signature of the controller software;
- d. When a fault or a bad match has occurred in the random-access memory (RAM) or in the program storage medium of a controller;
- e. If an unreasonable or no tolerable amount of credits is detected (this amount is defined by the progressive configuration which is based on the number of bets and the number of machines);
- f. When the progressive configuration has not been established or is lost;
- g. When the current amount of the progressive prize is greater than its limit set;
- h. If the game meters are authenticated against the meters of the controller (via communication between the slot machine board and the controller) and are not reconciled;
- i. If attempts of unauthorized access to the progressive wide area system have been detected.

- 3.10.4. When resuming the progressive controller, the following procedures must be performed as minimum requirements:

- a. Any communication to an external device will not begin until the program resuming routine has been successfully completed, including self-tests;
- b. ~~The manufacturer must identify the "routine for resumption of the program" in the documentation or manual of the product submitted to the respective certifying laboratory.~~
Revoked by Resolución Exenta N°. 219
- c. Progressive system's control programs should verify themselves to detect possible corruptions due to failures in the storage medium of the program. Authentication may use checksum, but it is preferable that cyclic redundancy check (CRC) calculations are used (at least 16 bits). Other methodologies are acceptable if they use a comparable level of integrity;
- d. The integrity of all critical memory should be reviewed;
- e. The shutdown process should be tested to verify its correct conclusion and an appropriate message should be displayed if an incorrect conclusion is detected;

- f. The software must be able to detect any change within the slot machine program, from the moment in which the progressive controller was interrupted. If a change is detected, the machine must be blocked and display the relevant message until it is restored by an authorized person.

- 3.10.5. The manufacturer must identify the "resuming program routine" in the documentation or product manual submitted to the respective Certifying Laboratory.

3.11. Progressive reconciliation

- 3.11.1. All progressive systems must be fully capable of being audited, for which they must keep complete audit sequences, event logs and meters or accounting meters.

- 3.11.2. All current amounts of the progressive system must be fully capable of reconciling from the meters stored in the system (eg contributions from players and hits by slot machine).

- 3.11.3. The progressive management system must be backed up at least once every 24 hours with all the parameters, audit sequences, variables and events related to the current amounts of the progressive.

- 3.11.4. Wide area systems (WAP) progressive must have the ability to send all the required information, when requested by an Online Monitoring and Control System, using a standard interface. When the reconciliation reports are generated from the Online Monitoring and Control System, it must be possible to easily verify that the data comes from the progressive wide area system (WAP).

- 3.11.5. The following minimum information must be recoverable in each progressive jackpot from the progressive wide area system (WAP) or its files:

- 1. The current date and time;
- 2. The total number of slot machines interconnected to each jackpot;
- 3. The total number of slot machines currently in communication with the progressive wide area system;
- 4. Number or name of the level, number or identification of the progressive;
- 5. Date and time of creation and/or last change of level;
- 6. Total contributions from players received since the beginning of operation of the program or since the last reporting period;
- 7. Total bets contributions made by players counted from the last hit to the progressive;
- 8. Total number of progressive prizes;
- 9. Total amount paid for the progressive prizes stated in point 8;
- 10. Total amount of progressive prizes won and paid by the slot machine and recorded in the player's credit meter;
- 11. Total amount of progressive prizes won, and hand paid by the floor staff;
- 12. Current amount of the progressive prize;

13. All the progressive parameters, eg. limit or top value for the change of the percentage ratio of increment; if applicable, and percentage increment ratio for hidden or reserve jackpots.
14. Details of at least the last twenty-five hits of progressive prizes.