# TECHNICAL STANDARDS FOR GAMING DEVICES AND ASSOCIATED EQUIPMENT

## STANDARD 1

### DEFINITIONS; INTEGRITY OF GAMING DEVICES; AND PROPER ACCOUNTING FOR GAMING DEVICES

**1.010 Definitions.** As used in these standards unless the context requires otherwise:

1. "Alterable media" means any form of storage device that allows the modification of the programs or data on the device during the normal operation of the EGD. This does not include devices typically considered to be alterable but through either software or hardware means acceptable by the Chair, have been rendered un-alterable.

2. "Cashable credits" means the monetary units displayed on a credit meter that are redeemable for cash.

3. "Cashless wagering kiosk" is a device capable of accepting or generating wagering instruments and/or wagering credits, is capable of initiating electronic transfers of money to or from a wagering account, or is used to facilitate other forms of cashless wagering functionality.

4. "Chair" means the Chair of the Nevada Gaming Control Board or the Chair's designee.

5. "Client station" means the device the player uses to participate in gaming offered by a licensee as part of an electronic table game system, an integrated gaming system, a system based game, or a system supported game. The term does not mean a mobile communications device.

6. "Complete voucher" means a voucher which contains, at a minimum, a complete validation number and is of a quality that can be redeemed through the use of an automated reader or scanner.

7. "Conventional ROM device" is a read only memory device incapable of being altered while installed in an EGD and may contain control programs or data that are directly addressed by a processor.

8. "Credit meter" means a slot machine indicator that displays the number of denominational credits or monetary value available to a player for wagering.

9. "Cryptographically secure pseudorandom number generator" or "CSPRNG" means a pseudorandom number generator that is resistant to compromise through knowledge of the past or current internal state of the PRNG, satisfies the next-bit test, and passes specified randomness tests.

10. "Dealer operated electronic table game" means any equipment or mechanical, electromechanical or electronic contrivance, component, system or machine used in conjunction with a live "game" or "gambling game" as defined in NRS 463.0152 in which the dealer determines the outcome of the game. Dealer operated electronic table games are associated equipment as defined in NRS 463.0136.

11. "Debit instrument" means a card, code or other device with which a person may initiate an electronic funds transfer or a wagering account transfer.

12. "Electronic funds transfer" means a transfer of funds from an independent financial institution to a client station, game, or gaming device through a cashless wagering system.

13. "Electronic gaming device" or "EGD" means a slot machine or client station.

14. "Electronic table game" means any equipment or mechanical, electromechanical or electronic contrivance, component, system or machine used to facilitate, fully automate, or simulate the play of a live "game" or "gambling game" as defined in NRS 463.0152. Electronic table games electronically accept wagers, randomly generate game elements or outcome, evaluate outcome and award payment. Electronic table games are gaming devices as defined in NRS 463.0155.

15. "Electronic table game system" means a system comprised of a server component and client stations that, together, form a single integrated electronic table game or dealer operated electronic table game.

16. "In-session feature" means an option presented to the player prior to the initiation of a game or within a gaming session that allows a player to select an artistic attribute such as graphics or sound to provide entertainment value to the game for which consideration is paid.

17. “Inappropriate coin-in” is a legal coin or token of the correct denomination which has been accepted by an EGD after the EGD has already accepted its maximum number of coins or when the EGD is in a state in which it normally rejects additional coins.

18. “Incomplete voucher” means a voucher which contains, at a minimum, the voucher validation number printed across the printed leading edge and is manually redeemable, but is not of a quality that can be redeemed through the use of an automated reader or scanner.

19. “Integrated gaming system” means the collection of hardware and software with which the player may participate simultaneously on a single device in any combination of wagering on a game or gambling game, race book or sports pool wagering, or any other wagering opportunity acceptable to the Chair. The term does not include a mobile gaming system.

20. “Mobile communications device” means the mobile device that a player uses to participate in mobile gaming. The term includes devices designed specifically for the use of mobile gaming devices provided by a player, such as a smartphone or tablet, to conduct mobile gaming activity. The term does not include stationary EGDs or client stations that make use of wireless communications.

21. “Multi-factor authentication” is a method of authenticating an individual’s identity through the use of different kinds of evidence. For purposes of these standards, multi-factor authentication uses, at a minimum, two of the following factors:

(a) What the individual knows as a secret, such as a password, PIN, or answers to questions;

(b) What the individual uniquely has, such as a physical token, electronic token, or an ID card; and

(c) What the individual is, such as biometric data like fingerprint, face geometry, or voice recognition.

22. “Non-cashable credits” means the monetary units displayed on a credit meter that have no cash redemption value.

23. “On-line slot system” means, as used in these standards, an on-line slot metering system, a cashless wagering system, or both.

24. "Player interaction technology" means equipment that facilitates a player's physical interaction with an EGD, allowing the player to direct commands, perform physical actions, or simulate physical activity. Examples include, without limitation, touch screens, keypads, joy sticks, motion sensors, image sensors, image displays, infrared emitters and detectors, and accelerometers.

25. “Print failure” is a condition following the failed attempt to print a complete or incomplete voucher.

26. “Promotional account” means an electronic ledger used in a cashless wagering system to record transactions involving a patron or patrons that are not otherwise recorded in a wagering account.

27. “Random Access Memory” or “RAM” is the electronic component used for computer workspace and storage of volatile information in an EGD. The term does not include memory which is used exclusively for bit-mapped video displays.

28. “Random Number Generator” or “RNG” is a hardware, software, or combination hardware and software device for generating number values that exhibit characteristics of randomness.

29. “Read Only Memory” or “ROM” is the electronic component used for storage of non-volatile information in an EGD. The term includes Programmable ROM and Erasable Programmable ROM.

30. “Server component” is the system portion of a system based or system supported game.

31. “Slot machine coupon” means a printed wagering instrument that has a fixed dollar wagering value that can only be used to acquire non-cashable credits.

32. “Slot machine wagering voucher” means a wagering voucher as defined in Regulation 1.190.

33. “Socket ID” as used for a system based game means the unique identification assigned to a client station or mobile communications device for accumulating and recording meter and wagering account transfer data associated with a client station or mobile communications device.

34. “Strong authentication” is a method of authenticating an individual’s identity through the use of at least two responses to any of the three factors of muti-factor authentication.

35. “System game” means a system based or system supported game as defined in Regulations 1.172 and 1.174, respectively.

36. “Tilt condition” is a programmed error state for EGD. A tilt condition has occurred when the EGD detects an internal error, malfunction, or attempted cheating, and it disallows further play until the error is resolved.

37. “Wager category” means the specific wager amount or amounts corresponding to a theoretical payback percentage within a single paytable that has multiple wager amounts, each having a corresponding theoretical payback percentage.

38. “Wagering account transfer” means a transfer of funds between a wagering account and a game or EGD.

39. “Wagering instrument” has the meaning ascribed to it in NRS 463.019767 and includes slot machine coupons and slot machine wagering vouchers, or digital representations thereof.

(Adopted: 9/89. Amended: 11/20/97; 5/03; 1/1/05; 11/17/05; 7/26/07; 12/20/07; 8/8/11; 2/15/16; 2/26/26.)

**1.020 Safety and electrical interference immunity.**

1. An EGD must not present a physical safety, mechanical, electrical, or fire hazard when used in its intended mode of operation.

2. Electrostatic discharge:

(a) An EGD may exhibit temporary disruption when subjected to electrostatic discharges of 27,000 volts, but must exhibit a capacity to recover and complete an interrupted play without loss or corruption of any stored or displayed information and without component failure.

(b) A manufacturer may provide evidence of satisfying equivalent requirements by an OSHA Nationally Recognized Testing Laboratory for electrical interference immunity in lieu of the requirements of this subsection.

(c) This subsection does not apply to decorative lighting that is not necessary for the play of a game or EGD.

3. An EGD that incorporates a mobile device charging mechanism, to include a charging port or wireless charging technology, must be designed to prevent the charging mechanism from impacting the integrity of the EGD. This includes, without limit, electrically isolating the charging hardware from the primary EGD power supply and ensuring the charging mechanism cannot access the main processing unit of the EGD.

4. This section does not apply to devices provided by a patron used to conduct gaming activity or interact with an EGD. Such devices include, but are not limited to smartphones and tablets.

(Adopted: 9/89. Amended: 11/17/05; 2/15/16; 2/26/26)

**1.025 Physical security.**

1. An EGD must resist forced entry.

2. An EGD must have a protective cover over the circuit boards that contain control programs and circuitry used in the random selection process and control of the EGD, including any electrically alterable program storage media. The cover must be designed to permit installation of a security locking mechanism by the manufacturer or end user of the EGD.

3. System games:

(a) The server component must reside in a secure area where access is limited to authorized personnel.

(b) Server logs must:

(1) Log access to the system game automatically on the server component.

(2) Protect the logs from unauthorized alteration through a means acceptable to the Chair.

(3) Include time and date of the access and the identification of the accessing individual or individuals.

(4) Be retained for a minimum of 90 days.

(Adopted: 2/26/26)

**1.030 Coin and token acceptance.**

1. An EGD that accepts coins or tokens must only accept designated coins or tokens and reject others.

2. The EGD must be designed to minimize the potential for use of cheating methods such as slugging, stringing or spooning.

3. Inappropriate coins-in must be returned to the player or be added to the credit meter.

(Adopted: 9/89. Amended: 11/20/97; 7/26/07; 2/26/26)

**1.035 Wagering instrument acceptance.**

A wagering instrument presented to an EGD for redemption that not evenly divisible by an available credit denomination shall be immediately rejected if the EGD cannot account for, display to the patron, and payout partial credits.

(Adopted: 5/03. Effective: 2/1/04. Amended: 2/26/26)

**1.040 Hoppers.**

1. An EGD that supports a hopper must be designed to detect jammed coins, extra coins paid out, hopper runaway, and hopper empty conditions. The EGD must monitor the hopper mechanism for these error conditions in all active game states that do not indicate error conditions.

2. All coins or tokens paid from the hopper mechanism must be properly accounted for by the EGD including those paid as extra coins or tokens during a hopper malfunction.

(Adopted: 9/89. Amended: 2/26/26)

**1.045 Printers.**

1. EGD must be designed to detect low paper, paper out, printer failure, and paper jam printer conditions.

2. Printers must be mounted inside a lockable area of the EGD.

(Adopted: 5/03. Amended: 2/1/04;1/1/05; 2/15/16; 2/26/26. Section (1) effective 2/1/04. Section (2) effective 1/1/05)

**1.050 Credit play requirements.**

1. Cashable credits may be accumulated from wins, coin acceptance, currency acceptance, electronic funds transfers, token acceptance, wagering account transfers, wagering instrument acceptance, or any other transfers of cashable credits.

2. Wagering credits available for play must be wagered in the following order:

(a) Non-cashable credits;

(b) Cashable credits given away by a licensee; and

(c) All other credits.

(Adopted: 9/89. Amended: 11/20/97; 11/17/05; 8/8/11; 2/26/26)

**1.055 Auto-play functionality.**

1. An EGD that offers functionality to automatically place wagers on behalf of the player, referred to herein as “auto-play”:

(a) Must not activate or configure auto-play by default,

(b) Must require the player to physically interact with the EGD to acknowledge that the player intended to enable the auto-play functionality, and

(c) Must allow a reasonable period of time between games for the player to review the game outcome and/or stop auto-play.

2. Continuously holding down a button or pressing a touch screen must not result in an auto-play of the EGD.

(Adopted: 02/26/26)

**1.060 EGD communications.**

1. An EGD which is capable of communication with associated equipment or other equipment must utilize an interface which ensures that erroneous communications, or the malfunction of the associated equipment or other equipment will not adversely affect the operation of the EGD.

2. An EGD communicating with any device, such as a top box or external bonus controller, in which the award values of the device are calculated in the theoretical return to player of the EGD must:

(a) Prevent the play of the EGD if the communication with the device is disrupted;

(b) Report the combined theoretical return to player of the device and the EGD to an online slot metering system; and

(c) Meter all awards calculated in the theoretical return to player as coin-out.

3. System games may only communicate with associated equipment or other equipment external to the system game through a secure interface. This interface will specifically not allow an external connection to directly access the control programs and data of the system game. The interface must be based on a specific defined protocol or a specific set of defined commands and as a result of these commands, retrieve information for an external request.

4. Internet accessibility.

(a) An EGD, other than an interactive gaming device, may not directly access or be directly accessed via the internet.

(b) An EGD may indirectly access the internet or be accessed indirectly via the internet only using a method that securely isolates and segregates the EGD from the internet.

5. Communication between an EGD and any external device using a physical connection, or communication between the EGD external or internal to the EGD conducted using wireless transmission technologies such as Near Field Communications, Bluetooth, or WiFi must:

(a) Be secured to prevent the ability of unintended recipients to read the data;

(b) Employ a method to detect data corruption. Upon detection of corrupt data, correct or terminate the communication; and

(c) Employ a method to prevent modification of the data.

(Adopted: 9/89. Amended: 11/17/05; 2/15/16; 2/26/26)

**1.066 Remote access to system games.**

Remote access includes all access to a system game from outside the system gaming network including access from other networks within the same establishment. For purpose of this Standard “system gaming network” means any method uses and the components employed by a licensee to facilitate the operations of a system game.

1. Remote access to a system game may only be conducted with the server component.

2. Remote access to a system game may only be granted for the following activities:

(a) Monitoring system health and performance;

(b) Scheduling operational gaming device functions such as downloading of content;

(c) Troubleshooting system issues;

(d) Performing inquiry-only functions such as viewing logs or generating reports;

(e) Adding, reconfiguring, or removing control programs;

(f) Adding or removing EGD related firmware such as printer, bill validator, or touch screen firmware; and

(g) Any other activity that is acceptable to the Chair.

3. The EGD component of a system game must be securely isolated from any remote access connection through a means acceptable to the Chair.

4. A system game may only be accessed using a method that securely links the system game to the remote system requesting access. This secure link must uniquely identify the remote system requesting access as an entity authorized to conduct remote communications with the system game.

5. A game must log each remote access to the server component. The log must include time and date of the access and a list of programs transferred or changed.

6. If a system game allows for adding or modifying control programs or EGD related firmware through remote access, the control programs or EGD related firmware downloaded to system game must:

(a) Store the downloaded or modified control program or gaming related firmware in a separate area or partition of memory such that it is sufficiently segregated from the system game's control programs and data as to be unable to affect the operation of the system game.

(b) Authenticate the control program or gaming related firmware prior to performing any operation on it, including, but not limited to, decrypting, extracting, uncompressing or installation.

(Adopted: 11/17/05; Amended: 8/8/11, 2/15/16; 2/26/26)

**1.070 Error conditions.**

1. An EGD must detect and display the following conditions during idle states or game play. These conditions may be automatically cleared by the EGD upon completion of a new play sequence or the initiation of a new play sequence if the EGD maintains a log of the most recent thirty-five error conditions:

(a) Power reset;

(b) Door just closed; and

(c) Inappropriate coin-in if the inappropriate coin(s) in are not returned to the player.

2. An EGD must detect and display the following error conditions which must disable game play and may only be cleared by an attendant:

(a) Coin-in error (coin jam, reverse coin-in, etc.).

(b) Coin-out error (coin jam, extra coin paid out, etc.).

(c) Hopper empty or timed-out (Hopper failed to make payment).

(d) Hopper runaway.

(e) Low RAM battery. A designated battery replacement schedule may be used in lieu of a low battery detection scheme.

(f) Print failure.

(g) Printer mechanism paper jam. A paper jam condition must be monitored for at all times during the print process.

(h) Printer mechanism paper out, if the EGD has no other means to make a payout.

(i) Program error (Defective program storage media).

(j) Reel spin error of any type including a mis-index condition for mechanical reels. The specific reel number must be identified. If a tilt occurs while the reel(s) are spinning the EGD must spin the reel(s) at a slow speed.

(k) Removal of control program storage media.

(l) Uncorrectable RAM error (RAM defective or corrupted).

(m) Door open.

3. A description of device error codes and their meanings must be affixed inside the EGD unless the displayed device error codes are self-explanatory.

(Adopted: 9/89. Amended: 5/03; 1/1/05; 8/8/11; 2/15/16; 2/26/26)

**1.075 Game recall.**

1. An EGD must maintain and have the capacity to display a complete play history for, at a minimum, the last 10 games played. The game recall must contain for each played game:

(a) The date and time of the played game. The time shall include the hour, minute, and second the game was played;

(b) The credits available at the start of the played game;

(c) All wagers placed on the played game including a breakdown of lines, bet per line, and other betting options available;

(d) Intermediate play steps, such as hold, draw, or double down;

(1) EGDs offering games with a variable number of intermediate play steps per game may satisfy this requirement by providing the capability to display, at a minimum, the last 50 play steps per played game.

(2) In games where “free games” are awarded as the result of a qualifying alignment, the “free games” are regarded as intermediate play steps of the played game that initially warded the free games.

(I) The initiating played game and, at a minimum, the last 50 free games awarded must be retained.

(II) For games that award additional “free games” during free game play, the subsequent “free game” initiating games need not be stored unless they are contained in the last 50 free games played.

(e) The outcome of the played game, or representative equivalent;

(f) The credits won on the played game;

(g) The credits available for play at the end of the played game; and

(h) The credits cashed out at the end of the played game.

2. Game recall information must be stored in non-volatile memory.

(Adopted: 2/26/26)

**1.080 Control program requirements.**

1. The EGD must verify the integrity of all control programs and of all data upon a power cycle. The EGD must enter into an unplayable state upon a verification failure and require operator intervention to return to the EGD to a playable state.

(a) Employ a mechanism acceptable to the Chair which validates that all control programs, data, and graphic information are authentic copies of the approved components. The authentication mechanism must:

(1) Employ a hashing algorithm which produces a message digest output of at least 160 bits. The message digest must be stored in a secure form acceptable to the Chair;

(2) Prevent the execution of any control program determined to be invalid;

(3) Be protected from unauthorized alteration; and

(4) Be automatically executed upon a power cycle, game reset, or door open event prior to loading control programs, data and graphic information into electronically erasable or volatile memory and further play of the EGD;

(b) Provide for on-demand validation. The on-demand validation mechanism must:

(1) Employ SHA-1 and HMAC SHA-1 hashing algorithms;

(2) Allow for the selection and validation of:

(I) Control programs;

(II) Data and graphics; or

(III) Both control programs and data and graphics.

(3) Support GAT 3.5 of higher; and

(4) Identify control programs using the nomenclature with which they were approved.

(c) Check the addressable area of any alterable media for unintended programs or data and enter into a tilt condition if unintended programs or data are present; and

(d) Verify the integrity of the storage media and enter into a tilt condition if the storage media is found to be corrupt.

2. An EGD must:

(a) Verify the integrity of the contents of non-volatile memory used for crucial EGD functions including, but not limited to:

(1) Information pertaining to game recall;

(2) Random number generator outcome;

(3) Credits available for play; and

(4) Any error states.

(b) Verify the integrity of non-volatile memory following game initiation but prior to display of the game outcome to the player.

(c) Automatically tilt upon detection of any corruption that cannot be automatically corrected.

3. An EGD must have and maintain the capacity to display a complete transaction history for, at the minimum, the last 35 transactions with a cashless wagering system that incremented any of the in-meters and out-meters set forth in Technical Standard 1.800(2)(i) to (t), inclusive. For wagering instruments, the EGD must prevent the wagering instrument validation number from being displayed in its entirety in any operator or attendant mode of the EGD.

4. An EGD that incorporates operational functionality for purposes other than gaming activity, such as diagnostic, debugging, or show mode, must employ a mechanism to detect that the EGD is being operated in a non-gaming mode and continuously and prominently display a notification on the primary display indicating the EGD is not in a gaming operation mode.

(Amended: 8/8/11; 2/26/26)

**1.084 Control for system games.**

1. System games must be capable of validating that all control programs contained on the server component are authentic copies of approved control programs both automatically at least once every 24 hours and on demand. The authentication mechanism must:

(a) Employee a hashing algorithm which produces a message digest output of at least 160 bits. The digest must be encrypted using a public/private key algorithm with a minimum of a 512 bit key or must be a bit-for-bit comparison;

(b) Prevent the execution of any control program determined to be invalid;

(c) Provide a visual notification of the invalid control program;

(d) Reside on and securely load from storage that has been protected from unauthorized alteration, through means acceptable to the Chair; and

(e) Maintain a log containing the results of each automated execution of the validation mechanism and shall identify any invalid program components. The log shall contain the validation results for, at a minimum, the prior 90 days.

2. The server component must provide for on-demand validation. The on-demand validation mechanism must:

(a) Employ SHA-1 and HMAC SHA-1 hashing algorithms;

(b) Allow for the selection and validation of:

(1) Control programs;

(2) Data and graphics; or

(3) Both control programs and data and graphics.

(c) Be available via an application interface or other method acceptable to the Chair, the results of which must contain, at a minimum, the control program identification information and the resultant hash; and

(d) Identify control programs using the nomenclature with which they were approved.

3. System games shall be configured such that the system administrator level access may not be achieved without the presence and participation of at least two individuals.

4. System game logs must:

(a) Contain an entry anytime an individual causes a control program residing on the system component to be added, removed, or altered;

(b) Contain:

(1) The date and time of the action;

(2) The identification of the component affected;

(3) The identification of the individual performing the action;

(4) The reason for the action; and

(5) Any pertinent authentication information.

(c) The log must be maintained for at least 90 days.

5. When changing software, system game logs must:

(a) Contain an entry anytime a change is made to control programs, and graphics or sound unless graphics or sounds are used for artistic attributes for a game and are not material for game play;

(b) Be maintained on the EGD and the server component;

(c) Contain:

(1) The date and time of the action;

(2) The identification of the component affected;

(3) The reason for the action; and

(4) Any pertinent authentication information.

(d) Be retained for at least 90 days;

(e) Be retained on the EGD for at least the last 100 changes.

6. A system game must not alter any component of the server component or a participating EGD that would interrupt or affect the function or operating parameters of a game in progress on any EGD.

7. A system game must be able to display the complete game play history for the last 10 games per game available on a client station in accordance with Technical Standard 1.075. This may be displayed on either the server or the client terminal.

8. A system based game must have:

(a) The capacity to display a complete transaction history for transactions with a cashless wagering system to include the last 35 transactions for each client station that incremented any of the in-meters or out-meters set forth in Technical Standard 1.800(1)(i) to (t), inclusive;

(b) The capability to initiate transaction history available at the EGD for the transaction history specifically associated with the particular client station initiating the history information request; and

(c) The capacity to display the transaction history for each EGD that make up the system based game on the server component of the system based game.

(Adopted: 11/17/05. Amended: 8/8/11; 2/26/26)

**1.086 Control Program Requirements for System Based Games. [Repealed: 2/26/26.]**

**1.090 Bonus or extended game features.**

1. An EGD which offers a game containing a bonus game or extended feature which requires player selection or interaction is prohibited from automatically making selections or initiating games or features unless the EGD meets one of the following requirements and explains the mechanism for auto-initiation or selection on the device glass or video display:

a. The player is presented with a choice and specifically acknowledges the player's intent to have the EGD auto-initiate the bonus or extended play feature by means of a button press or other physical/machine interaction;

b. The bonus or extended feature provides only one choice to the player, such as press button to spin wheel. In this case, the EGD may auto-initiate the bonus or extended feature after a time out period of at least 10 seconds; or

c. The bonus or extended feature is offered as part of community play that involves two or more players and where the delay of an offered selection or game initiation will directly impact the ability for other players to continue their bonus or extended feature. Prior to automatically making selections or initiating a community-based bonus or feature, the player must be made aware of the time remaining in which the player must make the selection or initiate play.

2. An EGD that offers a game containing a bonus game or extended feature that requires player selection or interaction in which the player selection or interaction involves strategy or player skill may use an automated selection process if it:

(a) Provides the player with at least 15 seconds to make a selection before automatically initiating a selection on behalf of the player; and

(b) Employs an automatic selection process that is based on a reasonable strategy.

3. An EGD that offers a game containing a bonus game or extended feature that requires player selection or interaction in which the player selection does not involve strategy or player skill, such as pick one of five, may use an automated selection process if it:

(a) Provides the player with at least five seconds to make the selection; and

(b) Uses a random selection process to make the automatic selection.

4. For all games that have a time limitation in which the player has to make a selection, a timer or similar indicator must be displayed onscreen so the player is aware of the time remaining to make the decision.

5. A game that displays the result of a player selection process may not display a non-winning outcome for which the player had no opportunity to receive through the player selection process. For pre-determined outcomes where the prize is the same regardless of the player's selection, the game may not display other prize values at the conclusion of the feature.

(Adopted: 12/04. Amended: 8/8/11; 2/26/26)

**1.095 Progressive functionality.**

1. An EGD that allows for the use of progressive functionality must:

(a) Provide a mechanism to manually adjust the progressive value; and

(b) Maintain a log containing the last 10 manual adjustments to the progressive. The log must contain the value before the change, the value after the change, and the date and time of the change.

2. An EGD that utilizes a mystery progressive or other type of mystery bonus such that weighted tables are used in the determination of the winner or winning value must ensure that the trigger to award the prize is not predictable.

(Adopted: 2/26/26)

**1.100 Reel symbols**.

1. If a reel symbol is displayed to the player, it must be available for random selection and inclusion in a game outcome unless the game mode or rules specify otherwise.

2. The home or default position for reel symbols or other game elements must not display a winning outcome.

(Adopted: 12/04. Effective: 1/1/05. Amended: 2/26/26)

**1.110 Safety. [Repealed: 2/26/26.]**

**1.120 System based game configuration.**

1. A system based game must be configured such that a failure of any single part or piece of equipment will not result in any stored information regarding game recall, cashless wagering transaction history, or game performance and accounting being lost or destroyed.

2. An EGD that is part of a system based game must be rendered unplayable if communication with the server or system component of the EGD is lost. The EGD must provide a means, such as a hand pay, for the player to cash out credits indicated on the EGD at the time the communication was lost.

(Adopted: 11/17/05. Amended: 8/8/11: 2/26/26)

**1.130 Requirements for downloading control program, graphic, or sound files to an EGD.**

1. An EGD that allows the adding, removing, or alteration of a control program, graphic, sound, or peripheral firmware must prevent any change from taking place that would interrupt a game in progress or a game session.

2. Prior to any control program, graphic, or sound file being added to or removed from an EGD comprising a part of a system game that would result in the loss of accounting meter information, a complete set of meter information to include all meters required by Technical Standard 1.800 must be successfully communicated to a slot accounting system.

3. Control program, graphic, or sound files may not be added to or removed from an EGD if an error or tilt condition exists on the EGD. An EGD may employ a manual mechanism to override a "door closed"

condition that would otherwise prevent the change in control program, graphic, or sound files from being applied.

4. The server component of a system game must authenticate any control program, graphic, or sound file downloaded to a participating EGD prior to the control program, graphic, or sound file being downloaded. The authentication mechanism must support a resolution of at least 160 bits.

5. An EGD that is part of a system game must employ a mechanism that authenticates control programs, graphics, or sound files downloaded to the EGD from the server component. The downloaded control programs, graphics, or sound files must be authenticated prior to being applied or made available for play.

6. The server component of a system game must employ a mechanism that will cause a participating EGD to authenticate any control program, graphic, or sound file contained on the EGD and must be able to disable the EGD if a control program, graphic, or sound file is found to be invalid. If an invalid control program, graphic, or sound file is detected, the EGD must enter into a tilt condition and a notification must be displayed on the server component.

(Adopted: 11/17/05. Amended 2/26/26)

**1.135 Requirements for downloading software to a conventional gaming device or client station from a system based game. [Repealed: 2/26/26.]**

**1.140 Conditions for changing active software of an EGD that is part of a system game.**

1. Active software consists of all the games currently available for immediate play on the EGD. For this section, immediate play means games that do not require additional software or a change in game configuration such as denomination, maximum wager, payback percentage, etc. prior to the player being able to initiate play. Active software also includes any software in which a change will interrupt normal game play, i.e. a control program and peripheral firmware.

2. To change active software, the EGD must:

(a) Be in the idle mode with no errors or tilts, no play and no credits on the EGD for at least 30 seconds; and

(b) Not be participating in an in-house or inter-casino linked payoff schedule where the change will result in a violation of Regulation 5.110 or 5.112.

3. If the change in the active software is the direct result of a player request or a qualifying event, such as the number of games played or cumulative amount wagered, that is not an identifier, the idle mode requirement of section 2(a) of this technical standard may be ignored. However, the active software may not be changed if an error or tilt exists on the EGD.

(Adopted: 11/17/05. Amended: 8/8/11; 2/15/16; 2/26/26)

**1.150 Documentation requirements for a system game.**

1. Documentation generated by a system game shall be available for a user specified period. The system must be designed so that documentation includes, at a minimum, each document:

(a) Document title;

(b) Version number of the current system software;

(c) Date or time period of activity;

(d) Date and time the document was generated; and

(e) Column and row titles (if applicable).

2. All required documentation must be generated by the system game, even if the period specified contains no data to be presented. The documentation generated should indicate all required information and contain an indication of “No Activity” or similar message if no data appears for the period specified.

3. Documentation required of a system game:

(a) Shall be available on a day, month, year-to-date basis and for at least a previous two-year cumulative basis.

(b) If mobile communications devices are used, the system based game shall be designed to display and create documentation on demand which includes the maximum number of socket IDs available to operate the mobile communications devices during the period being reported.

(c) The system game shall be designed so that the following documentation may be created daily or on demand:

(1) A list of all gaming device software, paytable, and denomination changes, such as additions, deletions, status changes, etc., occurring during the reporting period, by machine number. The report must also include the date and time of each change, and the ID of the user performing the change.

(2) A list of all gaming device software available in the system library, including software description, date/time software was added to the library, date/time the theme was last downloaded to a gaming device, identification of the manufacturer, and ID of user who loaded the theme into the system library for the period being reported.

(Adopted: 2/26/26.)

**1.200 Logging requirements for the use of identifiers.**

1. A system game or gaming associated equipment that assigns or tracks the use of identifiers must log the following information on the system component each time an identifier is assigned:

(a) A transaction identification number unique to the assignment;

(b) The transaction date and time;

(c) An identification number unique to the patron, if known;

(d) The category or name of the identifier assigned;

(e) The basis for the assignment of the identifier; and

(f) Any other information necessary to reconcile the assignment of an identifier to a patron.

2. The logged information required by Technical Standard 1.200 (1) must:

(a) Be retained for a minimum of 30 days;

(b) Be viewable on the system portion of the gaming device;

(c) Be exportable into a human readable or parsable data file; and

(d) Be protected from unauthorized alteration using a method acceptable to the Chair.

3. An EGD that uses identifiers must log the following information each time an identifier is used:

(a) A transaction identification number unique to the assignment or the transaction identification number assigned by the system component or associated equipment;

(b) The transaction date and time;

(c) The category or name of the identifier assigned; and

(d) The basis for the assignment of the identifier, if assigned by the EGD.

4. As used in this technical standard, the basis for the assignment of an identifier include, without limitation, one or more of the following:

(a) The frequency, value or extent of predefined commercial activity such as the patron's frequency of visitation or wagering activity at a licensee(s); activity on social media; or accumulation of rank, points, or standing in either gaming or non-gaming activity;

(b) The subscription to or enrollment in particular services such as membership in a licensee's customer loyalty program;

(c) The level of skill of a patron as identified or maintained by the gaming system or self-identified by the patron;

(d) The level of skill of a patron relative to the skill of other patrons participating in the same game; or

(e) The degree of skill required by the game

(Adopted: 2/15/16. Amended: 2/26/26.)

**1.300 EGDs that incorporate skill.**

1. An EGD that incorporates skill and makes use of player interaction technology must:

(a) Reasonably monitor the player interaction technology for proper. Upon detection of improper operation, the EGD must enter into a tilt condition;

(b) Provide a mechanism to calibrate the technology;

(c) Prevent unintended perturbations, such as physical, radio-frequency, or optical from impacting the proper operation of the game;

(d) Upon initialization, automatically verify that it meets the minimum hardware requirements necessary to properly conduct the game. The EGD must prevent initialization if the hardware is found to be insufficient; and

(e) Ensure that variances in hardware that meet the minimum hardware requirements, such as processing power, amount of memory, or data bandwidth available do not:

(1) Impact the proper operation of the game; or

(2) Provide an advantage or disadvantage to a player.

➥ This standard applies to the total amount of resources available to the gaming device. Manufacturers are encouraged to additionally monitor available resource levels during operation to ensure continued proper game play.

2. For each enabled paytable, the EGD must calculate the actual payback percentage every 10,000 games. The EGD shall:

(a) Determine the absolute value of the difference between the actual payback percentage and the theoretical payback percentage;

(b) Maintain a record of the most recent 50 calculations for each paytable to include the date, time, paytable ID, the calculated actual payback percentage and the absolute value of the difference between the actual payback percentage and the theoretical payback percentage; and

(c) Upon detection of three consecutive calculations, for a paytable, in which the absolute value of the difference between the actual and theoretical payback percentages is greater than 4%, enter into a tilt condition.

3. The rules of play for a game of skill or hybrid game must describe or display information adequate for a reasonable person to understand the method of game play prior to the player committing a wager. The rules of play may be communicated to the player singularly or through a combination of:

(a) The rules or descriptions displayed by the EGD;

(b) The pay table; or

(c) A game tutorial or demonstration displayed by the EGD or at a prominently disclosed location within the gaming establishment.

(Adopted: 2/15/16. Amended 2/26/26.)

**1.400 Random selection process and random number generator.**

1. The random selection process must meet 95 percent confidence limits using a standard chi-squared test for goodness of fit.

2. An EGD using a software RNG shall:

(a) For an EGD approved prior to January 1, 2027:

(1) Not use static seed upon initialization;

(2) Cycle the RNG at a minimum average rate of 100Hz (100 times per second); and

(3) Not draw RNG values for future play.

(b) For an EGD approved on or after January 1, 2027:

(1) Make use of a CSPRNG; and

(2) Pass a battery of recognized randomness tests including, without limitation, the Diehard, Dieharder, or NIST SP 800-22 battery of statistical tests.

3. An EGD using a hardware RNG shall:

(a) Continually monitor the RNG to ensure compliance with this standard. This shall be done by performing a chi-squared goodness of fit evaluation over the most recent 10,000 random outcomes selected for game play;

(b) Automatically maintain an event log displaying the results of the most recent 10 chi-squared tests to include the result of the test and the date and time the test was performed;

(c) Display a visual indicator of a failure; and

(d) Upon two consecutive failures, enter into a tilt condition.

4. A game that draws a predetermined set of outcomes for a game, such as a shuffled deck of cards, must prevent the information from being accessible.

5. The RNG and random selection process must be impervious to influences from outside the device, including, but not limited to, electro-magnetic interference, electro-static interference, and radio frequency interference.

6. An EGD must use appropriate communication protocols to protect the RNG and random selection process from influence by associated equipment or other devices which conduct data communications with the EGD.

(Adopted: 2/15/16. Amended: 2/26/26)

**1.500 Mobile gaming systems.**

1. User authorization.

(a) Mobile gaming systems must employ, at a minimum, strong authentication to verify that the mobile communications device is being operated by an authorized player prior to permitting access to the mobile gaming system.

(b) Mobile gaming systems must employ, at a minimum, one factor of strong authentication (single factor) to re-verify the mobile communications device is being operated by an authorized player at 30 minute intervals since the last authentication.

(c) The mechanism used to verify that the mobile communications device is being operated by an authorized player must be capable of being initiated both on demand and systematically.

(d) The mobile gaming session must be closed upon an unsuccessful verification attempt.

2. Mobile communications device communication with a mobile gaming system.

(a) Communication between a mobile communications device and a mobile gaming system must be conducted using a method that securely links the mobile communications device to the mobile gaming system and authenticates both the mobile communications device and mobile gaming system as authorized to communicate over that link.

(b) Mobile gaming system components which interface mobile communications devices must sufficiently isolate the mobile communications devices from the server portion of the mobile gaming system.

3. Mobile gaming systems must be designed to restrict the gaming operation of the mobile communications device to public areas as defined by Regulation 5.220.

(Adopted: 2/26/26.)

**1.600 Award cards and help screens.**

1. Award cards must be clearly identified and must be displayed at all times the EGD is available for play or be readily available for display on the EGD on demand by the player.

2. Award cards must accurately state the award that will be paid through any combination of dispensed coin, credit awards, vouchers, attendant pays, or electronic funds transfer when the player obtains a specific win.

3. The award card must clearly indicate whether awards are designated in denominational units, dollars and cents, or some other unit.

4. All award cards present on an EGD must reflect any change in award value which may occur in the course of play.

5. If the odds of hitting the top award advertised by the EGD exceed 100 million to one, the odds of the advertised jackpot must be prominently displayed on the award card.

6. A game utilizing multiple paylines must display to the player all winning paylines that were achieved in a game outcome and must give the player a reasonable amount of time to review the outcome for each payline before the next game is initiated. The display must indicate the winning payline and the amount won per winning payline. The EGD may allow the player to interact with the device to skip or speed up this display.

7. An EGD that contains games in which the game or rules of play change for the game during a gaming session, including the probability and award of a game outcome, must provide:

(a) The rules of play must clearly address the game elements or features that change and the conditions that impact the change.

(b) Options and features that are dependent on configuration, randomness, or player selection must be clear in the game rules, e.g. prizes “may” be awarded must state what the dependency is.

(c) Examples of acceptable disclosures include: “The chance of winning the XYZ award/feature/jackpot increases with the amount wagered” or “The number of available widgets changes based on the amount wagered.”

(d) Where base game reel symbol weightings change based on amount wagered, it is sufficient to state that a different set of reels is used based on the amount wagered rather than specifically calling out the specific game elements within the reels that change.

8. An EGD that supports the display of award cards and help screens in multiple languages must have the option for a player to display the award card and help screens in English. All award card and help screen information must be consistent between languages.

9. An EGD may not use language that suggests the probability of a particular outcome is more likely to happen than its actual probability. Examples include, but are not limited to, the use of the terms “Due”, “Overdue”, and “Ready to Hit.

(Adopted: 2/26/26.)

**1.700 EGD display device usage.**

1. An EGD that uses a service window or similar technology to utilize a full screen or monitor to display non-game related information on a screen that contains information required by 1.800(4) must:

(a) Be in an idle mode with no errors, tilts, or credits on the EGD. If the use of display for non-game related information is the direct result of a player request, the idle mode and no credit requirements do not apply;

(b) Allow a player or the operator to cancel the display of non-game related information; and

(c) Must cancel the display of non-game related information upon the acceptance of credits.

2. An EGD that uses a service window or similar technology to use a portion of or resize one or more of the display devices to display non-game related information on a screen that contains information required by 1.800(4) must:

(a) Allow the player or operator to cancel the display of non-game related information;

(b) Maintain the proper operation and legibility of the game related information as normally displayed.

3. An EGD that makes use of a demo or attract mode must not enter the demo or attract mode if there are credits on the EGD.

(Adopted: 2/26/26.)

**1.800 Meter requirements.**

1. An EGD must maintain digital storage meters, as defined in subsection 2, as follows:

(a) The meters must be capable of storing and displaying positive numbers up to at least 10 digits - 9,999,999,999 or $99,999,999.99;

(b) The meters must be available for display on demand;

(c) The EGD must be capable of communicating the required meters to an on-line slot system;

(d) The meters must accumulate in units equal to the denomination of the EGD or in dollars and cents;

(e) EGDs configured for multi-denomination play must display the required meters in dollars and cents;

(f) The meters must be specifically labeled as defined in subsection 2. EGDs that are unable to display the specific meter labels required due to physical display limitations may use a legend affixed to the inside of the EGD to correlate the displayed information to the required meter name; and

(g) Meter information required by this section must be preserved for a minimum of 72 hours after a power loss to the EGD.

2. An EGD must maintain the following meters, if the functionality of that meter is supported by the device:

(a) “Attendant Paid Cancelled Credits” accumulates the total value paid by an attendant resulting from a player-initiated cash-out that exceeds the physical or configured capability of the EGD to make the proper payout amount;

(b) “Attendant Paid External Bonus Payout” accumulates the total value of amounts awarded as a result of an external bonusing system paid by an attendant;

(c) “Attendant Paid Jackpots” accumulates the total value of credits paid by an attendant resulting from a single game cycle, the amount of which is not capable of being paid by the EGD itself. This does not include progressive amounts or amounts awarded as a result of an external bonusing system. This meter is only to include awards resulting from a specifically identified amount listed in the paytable/award card;

(d) “Attendant Paid Progressive Payout” accumulates the total value of credits paid by an attendant as a result of progressive awards that are not capable of being paid by the EGD itself;

(e) “Bill In” accumulates the total value of currency accepted. Additionally, the EGD must have a specific meter for each denomination of currency accepted that records the number of bills accepted of each denomination;

(f) “Cashable Electronic Promotion In” accumulates the total value of cashable credits electronically transferred to the EGD from a promotional account by means of an external connection between the EGD and a cashless wagering system;

(g) “Cashable Electronic Promotion Out” accumulates the total value of cashable credits electronically transferred from the EGD to a promotional account by means of an external connection between the EGD and a cashless wagering system;

(h) “Cashable Promotion Credits Wagered” accumulates the total value of promotional cashable credits which are wagered. This includes credits that are transferred to the EGD electronically or through the acceptance of a wagering instrument;

(i) “Coin In” accumulates the total value of all wagers, whether the wagered amount results from the insertion of coins, tokens, currency, deduction from a credit meter or any other means. This meter shall:

(1) Not include subsequent wagers of intermediate winnings accumulated during game play sequence such as those acquired from “double up” games;

(2) For multi-game and multi-denomination/multi-game EGDs, provide the coin in information and the theoretical payback percentage, on a per paytable basis; and

(3) EGDs which contain paytables with a difference in theoretical payback percentage which exceeds 4 percent between wager categories, maintain and display coin in meters and the associated theoretical payback percentage, for each wager category with a different theoretical payback percentage, and calculate a weighted average theoretical payback percentage for that paytable;

(j) “Coin Drop” accumulates the total value of coins or tokens diverted to the drop;

(k) “Coin Out” accumulates the total value of all amounts directly paid by the EGD as a result of winning wagers or any amount that is paid by the EGD which has been accumulated as a function of game play (i.e. bonus eligibility), whether the payout is made from the hopper, to a credit meter or by any other means. This meter will not record amounts awarded as the result of an external bonusing system or a progressive payout, unless the external bonusing system or progressive payout is included in the theoretical return to player of the game;

(l) “Coupon Promotion In” accumulates the total value of all slot machine coupons accepted by the EGD;

(m) “Coupon Promotion Out” accumulates the total value of all slot machine coupons issued by the EGD;

(n) “Electronic Funds Transfer In” or “EFT In” accumulates the total value of cashable credits electronically transferred from a financial institution to the EGD through a cashless wagering system;

(o) “Electronic Funds Transfer Out” or “EFT Out” accumulates the total value of cashable credits electronically transferred to a financial institution from the EGD through a cashless wagering system;

(p) "In-Session Feature Out" accumulates all credits deducted from the credit meter paid as consideration for an in-session feature for an EGD that makes use of in-session features;

(q) “Machine Paid External Bonus Payout” accumulates the total value of additional amounts awarded as a result of an external bonusing system and paid by the EGD;

(r) “Machine Paid Progressive Payout” accumulates the total value of credits paid as a result of progressive awards paid directly by the EGD. This meter does not include awards paid as a result of an external bonusing system;

(s) “Non-Cashable Electronic Promotion In” accumulates the total value of non-cashable credits electronically transferred to the EGD from a promotional account by means of an external connection between the EGD and a cashless wagering system;

(t) “Non-Cashable Electronic Promotion Out” accumulates the total value of non-cashable credits electronically transferred from the EGD to a promotional account by means of an external connection between the EGD and a cashless wagering system;

(u) “Number of games since door close” accumulates the number of games played since the most recent door closure;

(v) “Number of games since power reset” accumulates the number of games played since the most recent power reset;

(w) “Physical Coin In” accumulates the total value of coins or tokens inserted into the EGD;

(x) “Physical Coin Out” accumulates the value of all coins or tokens physically paid by the EGD;

(y) “Voucher In” accumulates the total value of all slot machine wagering vouchers accepted by the EGD;

(z) “Voucher Out” accumulates the total value of all slot machine wagering vouchers and payout receipts issued by the EGD;

(aa) Wagering Account Transfer In (“WAT In”) accumulates the total value of cashable credits electronically transferred to the EGD from a wagering account by means of an external connection between the EGD and a cashless wagering system;

(bb) Wagering Account Transfer Out (“WAT Out”) accumulates the total value of cashable credits electronically transferred from the EGD to a wagering account by means of an external connection between the EGD and a cashless wagering system; and

(cc) Such other meters as may be required by the Chair.

3. An EGD that allows for additions to or deductions from the credit meter that would not otherwise be metered under the requirements of paragraphs a to cc, inclusive, of subsection 2, must maintain meters sufficient to properly reconcile all additions to or deductions from the credit meter. Examples include, without limitation, fees paid to enter a contest or tournament; awards from a contest or tournament; tipping; and the use of wagering credits on wagering opportunities that would not otherwise be considered coin in for the EGD.

4. Unless a tilt condition or other malfunction exists, an EGD must have meters in units equal to the denomination of the current game selection, in dollars and cents or in other units acceptable to the Chair, continuously displaying to a player the following information as it pertains to the current play or monetary transaction:

(a) The coins or credits wagered;

(b) The coins or credits won, if applicable;

(c) The coins paid by the hopper for a credit cash-out or a direct pay from a winning outcome; and

(d) The credits available for wagering, if applicable.

5. The server component of system based games must store, must be able to display, and must be able to send to a slot accounting system, meter information that complies with the requirements of Technical Standard 1.800 that are associated with the play of each individual client station as well as for the system based game in its entirely.

(Adopted: 2/26/26.)

## End – Technical Standard 1