



BINGO CARD-MINDING SYSTEMS STANDARDS

Adopted March 18, 2011

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FORWARD AND ACKNOWLEDGEMENT:

INTRODUCTION AND CURRENT SITUATION:

The North American Gaming Regulators Association (NAGRA) is in the process of establishing standards for electronic card-minding systems for member regulators. Many jurisdictions adopt these standards as written, and many others reference them to effectively support their mandate of ensuring honesty and integrity in the conduct of bingo.

It has been recognized by our members that these standards should be developed to ensure effectiveness and flexibility in response to new developments and changing trends in the industry. This review was announced at the NAGRA conference in June, 2009. A Committee Chair was appointed by the President in the fall of 2009 and, in January, 2010 NAGRA sent out a call for volunteers to assist along with those who had volunteered during the breakout session in June.

These volunteer committee members are:

Phil Sanderson, Texas Lottery Commission
Simone Syrenne, Manitoba Gaming Control Commission
Morris Choma, Manitoba Gaming Control Commission
Todd Gardner, Michigan Lottery
Michael Rzymek, Ohio Attorney General
Bernice Caruth, Minnesota Gambling Control Board
Jennifer LaMont, Washington State Gambling Commission
Sonja Dolson, Washington State Gambling Commission

Mary Magnuson, NAFTM
Mark Newton, Video King Gaming and Entertainment
Roger Franke, Arrow International
Jim Campo, Arrow International
Tamara Dietrich, Arrow International
Mike Capen, GLI
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Ron Rollins, Eclipse Compliance Testing
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NORTH AMERICAN GAMING REGULATORS ASSOCIATION (NAGRA) **BINGO CARD-MINDING SYSTEMS STANDARDS**

SECTION 1 – PURPOSE STATEMENT:

These standards are to provide regulatory guidance to jurisdictions contemplating legislation that currently permit or are contemplating the use of card-minding devices in association with bingo. The Association recommends that all jurisdictions currently authorizing card-minding devices review their statutes and regulatory criteria, and consider legislative changes to meet as many of these standards as practical. These standards and any statements contained within are not to be construed as an endorsement of this or any other forms of gambling.

SECTION 2 – GENERAL STATEMENT:

Bingo is a specific form of gambling played for prizes, traditionally using cards or paper having five rows of five squares bearing numbers, except for the center square which is a free space, and the letters B-I-N-G-O appearing in order above the five columns. However, other variations of cards and paper have been introduced and approved in many jurisdictions. Players will cover numbers as designators similarly identified are drawn at random, and the game is won by a player who first covers a predetermined arrangement of numbers on his or card.

These standards are meant to address “session -based bingo”, including the role of the caller and the ability for players to elect to play on either card-minding devices or paper in the same game at the same time.

Bingo Card, as used in this document, refers to the individual face bearing numbers on which the pattern is to be achieved. The term bingo card is equivalent to: “electronic card facsimile” or “bingo face” and is not intended to limit or restrict the actual form factor.

The specific type and form of bingo faces permitted within a jurisdiction will be based on the underlying statutes permitting bingo.

Other than the traditional bingo card described above, alternative styles of bingo cards may include, but are not limited to, the following:

- Double Action Bingo – a card where there are two numbers in each square
- Loteria – a card which displays symbols or pictures. Normally, playing cards are utilized instead of numbered balls.
- Mark all – a card which includes a numbered center space
- U-Pick - a card with equal rows and equal columns where one or more numbers are selected by the player.

SECTION 3 – GENERAL PRINCIPLES:

Legislation authorizing bingo should provide for regulation and control of the activity while assuring equal treatment of those regulated. The key to successful regulation and control is a clear legislative mandate, implemented by an adequately funded regulatory body, which has been granted the authority necessary to complete the assigned tasks. The Association recommends that legislation or statutes authorizing bingo:

1. Provide a statement of intent clearly outlining the legislative body's purpose for authorizing the activity and emphasizing the importance of regulation and control of the activity.
2. Grant the regulatory body authority to draft or approve rules and/or terms and conditions governing the licensing, conduct, compliance and inspections, if required, by the regulatory body.

3. Assign the responsibility for implementing all aspects of the legislative or statutory mandate to a single regulatory body and, to the degree practical, provide the regulatory body with an operating environment independent of undue influences.
4. Provide that the cost of regulating bingo is adequately funded.
5. Grant authority to the regulatory body to enforce and ensure compliance with all aspects of the regulation, including establishing appropriate disciplinary measures.

SECTION 4 – DEFINITIONS:

As used throughout these standards, the following definitions apply:

“Account Number” means the unique identification number, if any, assigned by a card-minding system's point of sale to a customer during a purchase which is used to log onto a card-minding device to play bingo.

“Bingo” means a specific game of chance in which prizes are awarded on the basis of covering designated numbers or symbols conforming to randomly selected numbers or symbols.

“Card-minding system” means an electronic or computerized device and related hardware and software, that is interfaced with, or connected to, equipment used to conduct a game of bingo. A card-minding system consists of the following two parts:

- a. **“Card-minding device”** means a device used by a player to monitor bingo cards played at an organization's bingo occasion and which:
 - i. provides a means for the player to input numbers or automatically marks numbers as they are announced by the bingo caller (Automatically marking numbers is only permissible when allowed by local ordinance, statute or rule);
 - ii. compares the numbers on the bingo cards previously stored in the memory of the device; and
 - iii. identifies a winning bingo pattern.
- b. **“Site system”** means computer hardware, software, and peripheral equipment, that is located at the bingo premises, is controlled by the organization conducting bingo, and interfaces with, connects with, controls or defines the operational parameters of card-minding devices. Site Systems must include, but are not limited to, the following components: point of sale station, a caller station verifier, required printers, remote access capability, proprietary executable software, report generation software and an accounting system and database.

“Card number range” means the range of unique numbers that are on the card faces that are actually sold to a given player for use in a single card minding device. (Example: Device #1 is given card number range 2056-2080 and Device #2 is given card number range 2081-2105.)

“Checksum”, **“Digital Signature”** or **“hash sum”** means a fixed-size value computed from a block of digital data for the purpose of detecting errors.

“Connected” means communication between the card-minding device and the site system during an active session by wired or wireless means.

“Device ID number” means the unique identification number, if any, assigned by a manufacturer to a specific card-minding device.

“Devices Played” means the card minding devices in a session, after applying void rules, that had cards enabled or loaded and those cards were played.

“End of occasion reports” means the reports generated by the site system at the end of each bingo occasion containing pertinent sales, voids, game, and system accounting information in a format prescribed by the regulatory body. These reports should include the following:

- a. organization name;
- b. organization Identification or License Number;
- c. bingo occasion site (location);

- d. sequential transaction or receipt number;
- e. date and time of the session;
- f. total quantity of card-minding devices loaded;
- g. account number or device ID number of each card-minding device loaded;
- h. total dollar value of sales of card-minding devices;
- i. total quantity of voided transactions to include the dollar amount;
- j. total quantity of reloaded bingo cards;
- k. card number range of card faces used with each card-minding device;
- l. total sales amount of disposable card packages sold;
- m. listing of the balls called, in the order called, for each game;
- n. listing of all non-winning card face numbers, if verified for each game; and
- o. listing of all the winning card face numbers verified for each game.

“Independent testing facility” means a laboratory approved by the Regulatory body that is demonstrably competent and qualified to test card minding systems scientifically and evaluate them for compliance with statutes and regulations. An independent testing laboratory shall maintain the current applicable standards of the International Organization of Standardization as an accredited laboratory in the field of Information Technology testing. An independent testing laboratory shall not be owned or controlled by an organizational licensee, the state, or any manufacturer, supplier or operator of card minding systems.

“Model number” means a number designated by the manufacturer that indicates the unique structural design of a card-minding device or site system.

“Package number” means a number identifying the complete package of bingo cards purchased for a card minding device.

“Proprietary software” means custom computer software developed by the manufacturer that is a primary component of the card-minding system and is required for a card-minding device to be used in a game of bingo.

“Secondary component” means additional software or hardware components, provided by the manufacturer, that are part of, or are connected to, a card-minding system that does not affect the conduct of the game of bingo. Secondary components may include computer screen backgrounds, battery charge -up software routines, printers, printer software drivers, and charging racks.

“Software modifications” means alterations to the proprietary software.

“Transaction log” means a site system report containing a record of transaction information in detail.

“Version number” means a unique number designated by the manufacturer to signify a specific version of software used on or by the card-minding system.

SECTION 5 – NETWORK COMMUNICATION:

The type(s) of connectivity between the site system and card-minding device should be a consideration made by the jurisdiction. The most common network connections are;

Hard line or direct communication – The site system and the card-minding devices are connected by a physical line of communication or direct connection between the site system and the card-minding device.

1. Wireless Communication – The site system communicates with the card-minding device by either one-way technology such as RF broadcasting or 2-way technology such as Wi-Fi. Bingo information that may be transmitted via wireless communications include but are not limited to:
 - a) One -Way: (Caller stand to device) –
 - i. Game Identifier –this could be a internal game sequence number or the number listed on the printed bingo program or even the game name
 - ii. Game Pattern – this is predetermined (before balls are called) configuration of daubs that players are competing to achieve

- iii. Game Prize – monetary prize or value thereof
 - iv. Ball Calls – as numbers that are selected are called they can be transmitted to the device
 - v. Game Verification information – The display of any verified or winning card displays, as in the hall monitors
- b) Two -Way: (Device to site system to device) or (Caller stand to device to Caller stand)
 - i. Game Pack information purchased by the player
 - ii. Win notification : this is the “Stop the game I have a Bingo” message
 - iii. Winning card Information : Please verify card number 123,345

One -Way bingo communications are information that is made public to all the players in the regular course of the game through video monitors, public address systems and flashboard displays.

SECTION 6 – SITE SYSTEM STANDARDS:

1. The site system must record all transactions affecting a card-minding device.
2. The Card-minding Device identification number must be recorded in association with each transaction affecting the device.
3. The site system must record the date, time, quantity of bingo cards affected, price per card or packet, description of packet, and transaction number for each of the following transactions:
 - a) Loading of cards.
 - b) Voiding of cards.
4. The site system may allow the same bingo cards originally sold and loaded on a card-minding device (device #3, for example) to be reloaded on the same device, PROVIDED the transaction is recorded as a reload.
5. The site system shall not allow the exact duplication of cards on two different card-minding devices. However, the site system may allow bingo cards originally sold on one card-minding device (device #4, for example) to be reloaded on a different card-minding device (such as device #10), provided that the original device, #4, was removed from play and the site system recorded the transaction as a reload.
6. The site system must not be able to engage in any type of sale, void, or reload transaction unless a functioning card minding device or a programmable memory device that inserts into a card minding device is in communication with the site.
7. Upon completion of the each sale transaction, the site system must not allow date, time, quantity of bingo cards, price per card or packet, description of packet, or other source information to be changed.
8. The site system must prevent duplicate card-minding device identification numbers.
9. The site system must recognize the identification number of the card-minding device and record that number on the transaction log for each and every transaction that directly affects that device.
10. The site system must have a backup system to recover summary information if the power fails. This will be necessary for all reports and summary journals.
11. The site system must not allow a player or operator to select specific cards from a perm of bingo cards to be sold or played if such selection provides a material advantage to the player or operator.
12. The site system must record a sequential transaction number or audit tracking number for every transaction. The site system must not allow this number to be changed or reset manually.
13. The site system must produce:
 - a) a receipt,
 - b) a transaction log, and
 - c) end of occasion summary report(s) after each bingo occasion.

14. The site system must not allow a card minding device to enable and play more card faces than allowed by the regulatory agency, if there is a limit.
15. The site system must not erase or overwrite any of the required bingo occasion information until its detail information and summary information is transferred to a secondary storage medium.

SECTION 7 – CARD-MINDING DEVICE STANDARDS:

1. The card-minding device must have a unique, permanent identification number, or have a unique identification number secured by password or code and accessible only by use of such password or code:
 - a) The identification number must be coded into the software of the card-minding device
 - d) The card-minding device must automatically transmit the identification number to the site system or be known by the site system, to be recorded on the transaction log, each time the device is involved in a transaction with the site system
2. The card-minding device must recognize bingo numbers called and electronically daub all active bingo cards containing those numbers loaded on the device
3. The card-minding device must allow the player to cancel or correct numbers entered in error, if the player is required to enter the number.
4. The card-minding device must not allow a player to modify cards that are loaded and enabled for play.
5. The card-minding device must recognize and display all bingos achieved.
6. The card-minding device should be designed in such a manner to allow for one or more of the following daubing features as decided by the regulatory agency. The issue of auto daubing relates to what the device does with the ball call information, and what level of interaction the player must have with the device. Many jurisdictions want the player to interact with the device and not let the device take the place of the player. In all of these daub styles, someone will eventually call bingo.
 - a) Manual Ball call: This requires the player to identify uniquely the ball call that has been made. This could be through a number of methods: the selection of the number on a grid containing all 75 numbers, the selection of the letter from BINGO, then the number from a list of 15 numbers, or the entry through a keypad of the digits comprising the number. However, it requires the player to enter the numbers as they are called and therefore allows the player to enter a number in error. This method of daubing requires the player to have the ability to correct numbers entered in error.
 - b) Ball Call Confirm: This method requires the broadcast of the ball call information to the device. When the ball call is received by the player device, the player must perform an action to confirm or enter the ball call. This is typically through the pressing of a key or the touching of the screen. This daub style requires the player to perform an action for each and every ball call that is made. If the player waits, and a number of ball calls are made without the player performing any action, the player must then touch the screen (or press enter) once for each ball called. The ball calls should be processed in the order they were drawn and bingo win notification must [or “should”?] conform to the last number rule, if it is in force.
 - c) Semi -Auto Daub: This method requires the broadcast of the ball call information to the device. This method operates in the same manner as Ball Call Confirm, except that, if the player allows multiple balls to be called without interacting with the device, a single press will daub all the outstanding ball calls. The ball call that was most recently made by the caller is processed last and the bingo cards are scored with this number being the “last number” for any last number rule games. This method may also be used to allow for the player to daub multiple numbers with a single press for games that contain “wild numbers”, for example, even/odd or wild numbers. For example, if an odd/even game is played, the first ball will result in all the odds or evens being called. The player by a single touch will then daub all odd or all even numbers.

- d) Auto Daub: This method requires the broadcast of the ball call information to the device. As each ball is received by the device, the device behaves as though the player performed the ball call confirm action. That is to say, the device will act automatically as each ball call is announced.
7. The card-minding device must be programmed to only allow faces sold and loaded and enabled during an open bingo session, to be in play during that open session. Therefore, the card minding system shall provide a means to erase, disable, or render unplayable the faces used on each card minding device played in an open bingo session, prior to playing the same device in the next bingo session. Suggested means are at least one of the following:
- a) on deactivation of the open session,
 - b) by inserting the device into a charger,
 - c) by a timer within the device,
 - d) on activation of the next session,
 - e) by automatically erasing all bingo cards and/or bingo card face numbers stored in the device after the last bingo game of the occasion, or
 - f) any other suitable means to ensure game integrity.

SECTION 8 – SECURITY STANDARDS:

Gaming system networks must fundamentally address the issues of confidentiality, integrity, and availability.

Confidentiality methods guard against data theft during network eavesdropping, or unauthorized usage of the network by non -intended devices, and minimize interference from other networks. These methods typically include data encryption, unique network identifiers, gaming network isolation from routers on public or other networks, unique messaging protocols, device network log on authentication, and the ability to minimize interference by use of radio channel frequency selection and/or unique radio channel code selection.

Integrity methods provide delivery of accurate data to system devices. These methods may include encryption, unique message formatting, use of message checking characters that are used to detect corrupt data within the message and reject that message, and network retry of corrupt messages.

Availability methods provide a good functional network during gaming. These methods may include the system's ability to support multiple RF access points to a) provide good signal strengths over the entire physical area to be covered, and b) to prevent overload of many devices on any one access point. In support of multiple access points, a portable gaming device and system network should allow the portable device to stay in communication with the network as the device moves across the physical area covered (device roaming). In addition, availability methods may include an alert or notification when a major network component has failed, such as an access point, or its network connection, or a radio within a gaming device.

SECTION 9 – EQUIPMENT APPROVAL:

1. A card-minding system should not be sold, leased, or otherwise furnished to any person for use in the conduct of bingo until it has first been tested and certified as compliant with these standards by an independent testing facility or the regulatory agency's own testing lab.
2. The card-minding system should be submitted for testing at the manufacturer's expense. The testing facility should be required to ensure that the card-minding system conforms to the restrictions and conditions set forth in these standards.
3. The regulatory agency should establish an approval process after the card-minding system has been certified. The approval process should contain at a minimum:
 - a) Utilizing an Independent Lab;
 - i. Manufacturer has card minding system ready for submission, and informs regulator of pending submission, if so required.

- ii. Manufacturer submits system to lab with letter outlining what system and what jurisdiction to test against.
 - iii. Lab performs validation testing to ensure compliance with jurisdiction's requirements. This testing may include functional testing and/or modification testing, if applicable.
 - iv. Lab communicates with manufacturer / jurisdiction on any questions arising from testing.
 - v. Lab creates certification report which includes file verification methodology and software/firmware signatures (checksum).
 - vi. Manufacturer submits approval request with test results to the regulatory body.
 - vii. Regulatory body evaluates report and requests demo, if deemed necessary.
 - viii. Regulatory body issues approval.
 - ix. Manufacturer installs software within jurisdiction.
- b) Utilizing a Regulatory test lab;
- i. Manufacturer has card minding system ready for submission.
 - ii. Manufacturer submits system to regulatory body with letter outlining system specifics.
 - iii. Lab performs validation testing to ensure compliance with jurisdiction's requirements. This testing may include functional testing and/or modification testing, if applicable.
 - iv. Lab communicates with manufacturer on any questions arising from testing.
 - v. Lab creates certification report which includes file verification methodology and software/firmware signatures (checksum).
 - vi. Regulatory body issues approval.
 - vii. Manufacturer installs software within jurisdiction.

SECTION 10 – CONDUCTING ORGANIZATION REQUIREMENTS:

At a minimum, the regulatory agency should establish requirements for the conducting organizations to include the following:

1. The conducting organization should ensure the site system is accessible to the regulatory body via remote connection at all times.
2. The conducting organization should verify that the receipts for their session display the correct organization and location name, the correct time and date and all other information as required.
3. The conducting organization should verify that the end of occasion report(s) displays the correct organization and location name, the correct time and date and all other required information
4. Voided transactions should be treated in the following manner:
 - a) Voided transactions should be processed immediately;
 - b) If a voided transaction involves a card-minding device, the site system shall ensure all cards are erased or deactivated; or the device must be manually erased or deactivated, or taken out of play, if the faulty device cannot be connected
 - c) The player should present the receipt issued at the time of the purchase of the card minding device before the purchase is voided;
 - d) The word "void" shall be clearly printed on the receipt issued once the void has occurred;
 - e) The player should write his or her name, address, telephone number, signature, and amount of refund on the back of the void receipt before a partial or full refund may be issued; and
 - f) All voided receipts should be attached to the bingo occasion summary report printed at the end of each bingo occasion and maintained with the gaming records.
5. If presales are made and the associated cards are not purchased, loaded, and enabled for play on a card minding device, then those presales must be voided by the start of the second game.

6. Each organization should record all bingo sales, including sales of card-minding devices, disposable cards, instant bingo pull-tab tickets and event tickets on the point of sale station.
7. Each organization purchasing, leasing, or otherwise utilizing a card-minding system should maintain a log or other records showing the following:
 - a) the date the card-minding system was installed or removed; and
 - b) the name and identification or license number of the distributor from which the card-minding system was purchased, leased or otherwise obtained.
8. If multiple licensed organizations hold an interest in a card-minding system, a single record identifying each licensed organization should be retained on the premises where the card-minding system is utilized.
9. All records, reports and receipts relating to the card-minding systems' sales, maintenance, and repairs should be retained, for a period of time designated by the regulatory body, by the licensed organization on the premises where the organization is licensed to conduct bingo or, at a location designated in writing by the organization, for examination by the regulatory body.
10. Written notice of any change in the designated playing location or remote access should be received by the regulatory body prior to the change.
11. All card-minding devices should be loaded or enabled for play on the premises where the game will be played.
12. Card-minding devices should not be reserved for players. Each player shall have an equal opportunity to use the available devices on a first come, first served basis.
13. Once the last game of the bingo occasion has been completed, the organization shall print an end of occasion report(s) on the site system.
14. The bingo player must be physically present on the premises where the game is actually conducted during the game that is actually being conducted, unless the jurisdiction allows for linked or multi-location bingo.
15. An organization may not add or remove any software programs to an approved card-minding system without the permission of the manufacturer. If the regulatory body detects or discovers a card-minding system at a bingo premises that is using components or software that were required to have been approved by the regulatory body but have not been approved, the card-minding system is deemed to have an unauthorized modification.
16. No organization should display, use or otherwise furnish a card-minding device which has in any manner been marked, defaced, tampered with, or which otherwise may deceive the player or affect a player's chances of winning.