

NEVADA GAMING CONTROL BOARD
 ASSOCIATED EQUIPMENT REVIEW CHECKLIST
 ELECTRONIC KENO SYSTEMS

Auditors' Initials and Date

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Manufacturer: _____
 System/Version: _____
 Trial Location Name: _____
 Mfr#: _____ GCB Lab#: _____

Review Date(s): _____
 Auditor(s): _____
 Trial Location #: _____

Manufacturer's Personnel	Position	Contact Information

System Functionality and Reporting Requirements

General Report Requirements

1. Do all reports generated by the system contain the following attributes:
 - (a) Page Numbering, indicating the current page and total number of pages? (e.g. Page X of Y)
 - (b) Current Software Version Number? (including the engineering build number)
 - (c) Date/Time period (from and to) of activity covered by the report or, alternatively, an indication of "As Of" if the report includes data from a specific point in time?
 - (d) Date/Time the document was generated?
 - (e) Column and row titles?
 - (f) Title of the report
 - (g) Grand totals for the activity period covered by the report, and grand totals for the month-to-date, year-to-date, and life-to-date (at least two year comparison) amounts?

Industry Letter on Associated Equipment Reporting Requirements dated February 19, 2010

2. Does the system generate reports for all periods of activity even if the system has no data to present for the date/time period specified?
Industry Letter on Associated Equipment Reporting Requirements dated February 19, 2010

3. If the system has no data to present for one or more periods, do all system generated reports present \$0 dollar amounts or, alternatively, an indication of "No Activity" for these periods?
Industry Letter on Associated Equipment Reporting Requirements dated February 19, 2010

Logical Access Controls and Logging

4. Describe the method(s) employed to secure the system (i.e. passwords, biometrics, etc.) at all levels (Application, Database, Network, Operating System)?
IT MICS #5

5. Describe the method the system utilizes to force periodic password changes for user accounts.
IT MICS #6(a)

6. Describe how system utilizes password complexity requirements for user accounts with passwords being at least eight characters in length, and by utilizing at least two of the following four requirements:
IT MICS #6(b)
 - (a) Upper Case Letters.
 - (b) Lower Case Letters.
 - (c) Special Characters.
 - (d) Numeric Characters.

Pass	Fail	N/A	Comments

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7.	Describe the method that the system uses to prevent passwords from being reused (i.e. non-reusable for a period of 18 months or, non-reusable for at least 10 password changes). IT MICS #6(c)				
8.	How does the system detect and prevent users from gaining access through repeated password attempts resulting in failed login attempts? IT MICS #6(d)				
9.	How does the system log, at a minimum, the following events: IT MICS #7 (a) Failed login attempts? (b) Abnormal or unauthorized changes to live data files? (c) Changes to system policies and parameters? (d) Activity of administrative accounts? (e) Changes to date/time on master time server?				
10.	Describe the method to review the system logs (i.e. available in one or more reports, or viewable only through the system interface). IT MICS #7				
11.	Describe what reports the system generates for exception type activities (e.g., changes to system parameters, corrections, overrides, voids, etc.) that include the following, at a minimum: [Specify the report title(s)] IT MICS #9 (a) Date/Time of alteration? (b) Identification of user performing the alteration? (c) Data or parameter that was altered? (d) Value of the data or parameter prior to alteration? (e) Value of the data or parameter after alteration?				
12.	How does the system manage permissions for user accounts (i.e. through use of Group profiles or through Individual profiles) at the application, database, network, or operating system level? IT MICS #10 & 11				
13.	Describe and name the report(s) that the system produces listing user access that contains the following: IT MICS #12 (a) – (h) (a) Employee name. (b) Employee title or position description. (c) User login name. (d) Full list and description of application functions that each group/user account may execute. (e) Date/Time account was created. (f) Date/Time of last login. (g) Date of last password change. (h) Date and time account was disabled or deactivated. (i) Group membership of user account.				
14.	How does the system export the user access listing report to an electronic format that allows it to be reviewed using analytical data tools (i.e. spreadsheet or database)? IT MICS #32				
15.	Describe and list whether, and how, the system creates Generic, Default, Service/System, or Administrative level accounts upon installation at the operating system layer, application layer, or database layer? IT MICS #17-21				
16.	Describe how the system logs all administrative				

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- account usage, including the following: **IT MICS #23**
 (a) Date/Time of activity.
 (b) Login account name.
 (c) Description of event.
 (d) Value before change.
 (e) Value after change.
17. Describe the method of retention and viewing of such logs. **IT MICS #23**
18. Describe the method of configuring the system to secure terminals and server consoles after a defined period of inactivity. **IT MICS #43**

Keno Accounting, Reports, and Forms

19. Does the system generate a ticket for each keno write transaction that includes: **Keno MICS #1 & 26(a)**
 (a) Casino Name?
 (b) City and State?
 (c) Date of Write?
 (d) Game Number(s)?
 (e) Unique Ticket Number?
 (f) Station Number or Writer Identification Number?
 (g) Conditioning (including multi-race, if applicable)?
20. How does the system record all write transactions in an unalterable "restricted transaction log" or storage media such that the record is secured from unauthorized and unrestricted access by keno personnel? **Keno MICS #2 & 3**
21. How does the system record and report void transactions such that the following information is available: **Keno MICS #4(a)**
 (a) Ticket Number?
 (b) Date/Time of Void?
 (c) User ID of Employee Processing the Void?
22. How does the system prevent writing or voiding of tickets after a game has been closed and the number selection process for the game has started? **Keno MICS #5**
23. What mechanism does the system provide for numbers selected for a game to be immediately recorded by the keno system that includes: **Keno MICS #9 & 13**
 (a) Date?
 (b) Game Number?
 (c) Time the Game was Closed?
 (d) Numbers Drawn?
24. Describe the manner in which the system validates a ticket as a winner and displays the amount to be paid to the patron prior to processing any payout? **Keno MICS #14**
25. How does the system preclude payment on winning tickets that have been previously paid? **Keno MICS #15**
26. How does the system preclude payment of winning tickets that expire after a configurable period of time? **Keno MICS #15**

Pass	Fail	N/A	Comments

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27.		How does the system preclude payment on tickets that have been voided or have not yet been issued? Keno MICS #15				
28.		How does the system print the payout amount of a winning ticket (i.e. on the ticket face or printing a payment slip)? Keno MICS #16				
29.		How does the system track and report the amount of net cash that should be in each writer station throughout the shift? Keno MICS #21				
30.		Describe how the system restricts access to the amount of net cash that the system reports should be in the writer station only to supervisory personnel or higher? Keno MICS #21				
31.		What is the name of the cash summary report generated by the system for each shift, showing the computation of cash that should be in the writer station vs. the actual amount of cash turned in by the writer? Keno MICS #22				
32.		What is the name of the report generated by the system for all tickets written during the day ordered by each writer or cashier station, and by shift that includes: Keno MICS #26(a) (a) Date/Time of Write? (b) Ticket Number? (c) Station ID or Writer ID? (d) Amount of Ticket? (e) Game Number? (f) Conditioning, if applicable (including multi-race indication)?				
33.		What is the name of the report generated by the system for all payouts for winning tickets that includes: Keno MICS #26(b) (a) Date/Time of Write? (b) Date/Time of Payout? (c) ID of Station or Writer where Written? (d) ID of Station or Writer where Paid? (e) Ticket Number? (f) Game Number? (g) Write Amount? (h) Payout Amount?				
34.		What is the name of the report generated by the system for game information for all games played during the day that includes: Keno MICS #26(c) (a) Date/Time Game Closed? (b) Game Number? (c) Ball Draw Results?				
35.		What is the name of the report generated by the system a report providing a daily recap of activity by shift and by day that includes: Keno MICS #26(d) (a) Write? (b) Payouts? (c) Gross Revenue?				
36.		What report, or set of reports, does the system generate for exceptions (i.e. Voids, Late Pays, and Changes to Configurable Parameters, changes to paytables or draw results, payouts over configurable threshold, etc.)? Keno MICS #26(e)				

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37.	How does the system record at least the following for exceptions: IT MICS #9, Keno MICS #26(e) (a) Date/Time of Change? (b) ID of User Making Change? (c) Data or Parameter Changed? (d) Data or Parameter Value Prior to Change? (e) Data or Parameter Value After Change?				
38.	What is the name of the report generated by the system for each individual writer for each day that includes both the Write Amount and Win Amount? Keno MICS #27				
39.	What is the name of the report that the system generates showing a summary of revenue that includes, for each keno game operated, and the total for all games operating, the following: Keno MICS #28 (a) Game Number? (b) Write? (c) Payouts? (d) Win? (e) Win to Write Hold Percentage?				
40.	How does the revenue summary report present total amounts for each attribute for each day, cumulative month-to-date, and cumulative year-to-date? Keno MICS #28				
41.	What is the name of the system generated report for drawn ball number frequency showing the numerical frequency distribution for the day, week, month, and year? Keno MICS #47(f) & (g)				
	<u>Computerized Player Tracking Systems Featuring Player Promotional Accounts</u>				
42.	Does the system record any manual adjustments to player accounts? Keno MICS #38				
43.	Does the system generate a report detailing any adjustments to patron promotional accounts including the following: [State the report title(s)] Keno MICS #38 (a) Patron Name (b) Account Number (c) Specific Promotion, as applicable? (d) Amount of Adjustment? (e) Explanation for Adjustment? (f) Identification of User Performing Adjustment? (g) Identification of User Authorizing Adjustment?				
44.	Does the system generate a report detailing all promotional account activity and balances by promotion and by patron? [State the report title(s)] Keno MICS #38				
45.	Does the system prevent employees who redeem points for patrons from accessing inactive or closed accounts without supervisory authorization? Keno MICS #39				
46.	Does the system generate a report of patron promotional accounts showing any changes to the account status (active vs. inactive) by patron that				

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includes the patron name, account number, ID of user altering status of account, date/time of status change, Unique ID of user authorizing the change in account status, account status prior to change, and current account status? [State the report title(s)]
IT MICS #9, Keno MICS #41

47. Does the system record and report any and all changes to system or promotional parameters? [State the report title(s)] **IT MICS #7(d), IT MICS #23, Keno MICS #41 & 42**

System Components and Configurations

1. Specify the operating system name and version for all servers on which the system is being installed.
2. Specify the components being submitted for approval with the system including name, version, and server name/location where component is installed.
3. If the system utilizes back-end database(s), specify the database name, version, and server name/location housing the database(s) (i.e. FoxPro, Db2, MS SQL, Oracle, Pervasive, SQL Anywhere, etc.)
4. Specify the IP addresses for each server housing system components and data. (Include a topology diagram and network mapping diagram with the submission)
5. List all user accounts and associated account passwords that are configured on the system submitted for approval. (This includes accounts at the operating system, database, network, and application layers)
6. List the report generation software and version, if applicable (i.e. Crystal Reports, Microsoft SQL Reporting Services, etc.)

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Testing Procedures

Testing Objectives

- Keno tickets contain all required information.
- Keno system does not allow a ticket to be voided after the balls have been drawn and the game has been closed.
- Keno system properly settles winning tickets and reports the amount of each winning ticket to be paid.
- Keno system properly reports all write transactions by cashier and by shift.
- Keno system enforces password complexity parameters and periodic change requirements.
- Keno system properly reports user access listing with all required attributes.
- Keno system properly logs and reports all required system audit event activity.
- Keno system requires supervisory approvals prior to voiding a written keno ticket.
- Keno system properly records and reports all exception type activity.
- Keno system properly records and processes "multi-race" tickets for multiple games.
- Keno system properly records and reports ball draw results for each game played during a shift.
- Keno system properly records and reports all payouts on winning tickets occurring during a shift.
- Keno system does not allow payouts to occur for losing tickets, winning tickets previously paid, or on voided tickets.
- Keno system properly reports all unpaid tickets in detail and in total.
- Keno system properly records and reports patron promotional account balances.
- Keno system requires supervisory approval prior to making changes to patron account system parameters or adjustments to patron promotional account balances.
- Keno system properly records and reports changes to player tracking system parameters and player adjustments.
- Keno system properly reports statistical information for the day, month, and year to date.
- Keno system "restricted" copy of written tickets is secured from access to writers.

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- Keno system properly reports the frequency distribution of all ball draws occurring during the month, day, and year.

Setup Activities

1. Create the following user accounts:
 - (a) Two Keno Writers
 - (b) Keno Supervisor
 - (c) System Administrator
 - (d) Accounting Keno Revenue Auditor
 - (e) Players Club Clerk
 - (f) Players Club Supervisor
2. Configure at least 30 different keno games to occur during the day on two different shifts. If possible, configure the payout schedule to be similar to the one in use at the Field Trial location.
3. Configure passwords for accounts to expire at least once during the test period.
4. If applicable, configure the system to ensure user accounts require complex passwords.
5. Configure winning tickets to expire/purge unpaid tickets in two days.
6. Configure two writer stations to be used during the test period.
7. If the system uses Rabbit Ears, perform two test games drawing 20 numbers. Enter the numbers in the system and ensure that the system accurately records the amounts.
8. If the system uses a random number generator, perform two test games drawing 20 numbers. Ensure the numbers drawn are accurately reflected by the Keno system.
9. Perform test purchases of multi-game tickets, special tickets, way tickets, free play tickets, and straight number tickets.
10. Ensure that all tickets are properly categorized as winning or losing tickets. Ensure that each winning ticket appropriately reflects the correct payout.
11. Perform close procedures for the end of day and generate all system reports (including audit logs, exception reports, and user access listings).
12. Review all reports to ensure that the configuration and testing activity accurately reflects on the reports.

Daily Tests of Transactions

(To be performed over all three test dates)

13. Perform an initial ball draw to ensure the system is functioning properly, and that the balls are being accurately recorded in the keno system.
14. Open the shift and both writer stations, and write at

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least 30 tickets per game to include:

- (a) Way Tickets
- (b) Multi-Race Tickets
- (c) Special Tickets with Conditions
- (d) Free Play Tickets
- (e) Straight Number Tickets

15. Write tickets for both the current game (prior to being closed) and future games.
16. Attempt to write a Straight Ticket with more than the highest number of spots offered.
17. Attempt to write a Multi-race Ticket for more than the number of races offered.
18. Attempt to write a Way Ticket without betting on all possible ways (i.e., three groups of two will produce three four spots).
19. Attempt to process voids for the following:
 - (a) Void after calling of the game begins.
 - (b) Void after calling of game ends.
 - (c) Void multi-game ticket after some games have been called but before all games are called.
20. Void at least 10 tickets of various types for various games (five voids per writer station). Ensure the system requires a supervisor authorization prior to processing the void transaction.
21. Perform at least four cash transfers throughout the day for both cashier stations. Ensure the system shows proper cashier drawer balances and requires supervisory access to show the balances.
22. After games have closed, attempt to write additional tickets for that game. Ensure the system does not allow any tickets to be written.
23. Attempt to void a losing ticket for a game that has closed. Ensure the system prevents the void from occurring.
24. Process at least five payouts on winning tickets per game. Process payouts by a cashier other than the one who wrote the winning ticket.
25. Attempt to payout on a winning ticket that has already been paid. Ensure the system prevents the payout.
26. Attempt to payout on a voided ticket. Ensure the system prevents the payout.
27. Attempt to payout on a losing ticket. Ensure the system prevents the payout.
28. Attempt to change the system time before a game, during a game, and after a game has closed.
29. On subsequent test days, process the following:
 - (a) Payouts on winning tickets for games closing on previous days.
 - (b) Voids on tickets written on closed games occurring on previous days.
 - (c) Payouts on losing tickets written for closed

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- games occurring on previous days.
- (d) Alter the payout amount for a winning ticket for a game closed on a previous day.
- (e) Attempt to alter the ball draw recorded in the system for a closed game on a previous day.

30. Process end of day procedures and generate all applicable reports.

Testing of Application Controls
 (To be performed on at least one test date)

- 31. Force a password change and ensure the system requires password complexity as required by IT MICS #6.
- 32. Disable a user account and record the date and time and user account that was disabled for later comparison to system reports.
- 33. Add a new user account, recording the date and time of the addition and administrative account used to create the new user account.
- 34. Change the group membership and/or individual profile permissions for one user account.
- 35. Test the system to ensure that the terminals secure themselves after a defined period of inactivity. Record the setting and result.
- 36. Review system logging to ensure the usage of administrative accounts is accurately reflected.
- 37. Attempt three failed login attempts to ensure the system locks the user account to prevent further access attempts.
- 38. Review the user access listing to ensure that all events related to modification of user accounts are appropriately reported.

Audit Procedures

- 1. Review the Keno Daily Write report to ensure that all tickets written for each cashier and each game are accurately reported. Foot and cross-foot this report once to determine clerical accuracy.
- 2. Review the Keno Daily Payout report to verify that all tickets paid during the day are reported, and that all tickets appearing on the report were actually paid. Foot and cross-foot this report once to determine clerical accuracy.
- 3. Trace the physical tickets to both the Daily Write report and Daily Payout report to determine the ticket information matches, the write and payout amounts are correct, and that any specific game conditions were properly reflected.
- 4. Verify that all physical tickets contain the required information.
- 5. Examine the Game Information report to determine the accuracy of the game close time, ball draw results,

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game number, etc.

6. Trace the totals on the Daily Write and Daily Payout reports to the Daily Recap report for each shift. Verify the shift totals are correct and that the house win amount is correct. Foot and cross-foot this report once to determine clerical accuracy.
7. Review all voids to determine that they are reported and that all voids appearing on the void report actually occurred.
8. Review the system logs and user access listings to determine that all changes are properly reported.
9. Review the Daily Keno Revenue Summary and determine the accuracy of:
 - (a) Write, Payouts, Win, and Win to Write percentage for each keno game operated.
 - (b) Total Write, Total Payouts, Total Win, and Total Win-to-Write Percentages for all keno games operated.
 - (c) Daily, Monthly, Year-To-Date totals.
10. Foot and cross-foot the Daily Keno Revenue Summary at least once.
11. Review the ball draw frequency report to determine that the report accurately reflects the number of times each ball was drawn and numerical frequency distribution is appropriate.
