

BMM EVALUATION TEST REPORT

REVISED DATE:

1st May, 2018
(See Section 2)

Report Issue Date:

17th April, 2018

Issued To:

Jackpot 16 Card Game Inc

Issued By:

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Compliance Evaluation Tested By:

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NGCB Registration #31758-01

Manufacturer:

Jackpot 16 Card Game Inc
2501 West View St. Unit 215
Los Angeles, CA 90016

Compliance Evaluation for:**Game:**

Jackpot 16

Mathematical Pay Percentages:

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Reference Numbers:**BMM:**

JCG.1001

Revised Report Number:

JCG10012_E

NOTICE

This revised report serves as a replacement for BMM Evaluation Report JCG10011_E.

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Mathematical Pay Percentages:

Variation	RTP (%)	House Edge (%)
Player vs Dealer - 6 Decks	95.61	4.39
Player vs Dealer - 8 Decks	95.60	4.40
Player vs Player - 6 Decks	90.32	9.68
Player vs Player - 8 Decks	90.36	9.64

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1. PURPOSE

Jackpot 16 Card Game Inc has requested BMM Testlabs to perform a mathematical evaluation on the game: Jackpot 16. This evaluation tests the math for correct RTP and Top Award odds.

Exhaustive combinatorial algorithms were used to calculate the theoretical RTP and Top Award odds of Jackpot 16 for the Player versus Dealer scenario. A one billion game simulation was used to calculate the theoretical RTP and Top Award odds of Jackpot 16 for the Player versus Player scenario

The following assumptions were made throughout the evaluation:

- § Each standard deck of cards contains only Aces through Eights. All nines, tens, and face cards have been removed.

2. JACKPOT 16 RULES AND PAYTABLE

Jackpot 16 is a custom game similar to standard blackjack. The rules and payable are given below:

- § Jackpot 16 can be played with six (6) or eight (8) decks of cards that have the nines, tens, and face cards removed.
- § In Jackpot 16, aces count as one and all other cards count as their pip value.
- § The object of Jackpot 16 is to achieve a score as close to or equal to 16 with a maximum of four (4) cards and without busting.
- § There are two (2) ways of playing Jackpot 16.
 - Scenario 1 is a single Player versus the Dealer.
 - Scenario 2 is one (1) or more players versus each other.

Scenario 1 – Player versus Dealer

- § When there is only one (1) player at the table, they will play against the dealer.
- § To begin each round, the player will make a main wager.
- § The player and dealer will each receive one (1) card face up to begin. The player and dealer will have the option to hit up to three (3) times maximum where the second, third, and fourth cards will be dealt face down.
- § The player will complete their hand before the dealer.
- § If the player's hand is a natural sixteen (i.e. two card pair of eights), they will win automatically unless the dealer also has a natural sixteen, in which case the round will be a push.
- § Otherwise, the player may stand pat or draw cards until:
 - The player gets a total greater than 16, which is a bust and is an automatic loss.
 - The player is satisfied with their total.
 - The player has a total of four cards, at which point they must stand pat.
- § If the player has a total score greater than 16, this is considered a bust and is an automatic loss against the dealer.

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- § If the player does not bust, the dealer reveals their second card and resolves their hand as follows:
- If the dealer has a natural sixteen, the dealer wins and beats any player total, including any three (3) or four (4) card total of sixteen.
 - If the dealer has a total of 13 or higher, the dealer stands pat.
 - Otherwise, the dealer will draw until they either get a total greater than or equal to 13 or have a total of four (4) cards in their hand, otherwise the dealer will stand pat.
- § If both the player and dealer have not busted, the higher total wins.
- § If both the player and dealer have not busted and they have a tie score, this is a push
- § The following pay table is used for Jackpot 16 – Player versus Dealer:

Hand	Pays (to 1)
Player Wins - Natural 88	1
Player Wins - Other	1
Push	0
Player Loss - Dealer 88	-1
Player Bust	-1
Player Loss - Other	-1

Scenario 2 – Player versus Player

- § When there are two (2) or more players at the table, the players will compete against each other. The dealer will not participate as a player in this scenario.
- § To begin each round, each player will make a main wager to the pot. Each player must make the same wager amount.
- § Each player will each receive one (1) card face up to begin. Each player will have the option to hit up to three (3) times maximum where the second, third, and fourth cards will be dealt face down.
- § In succession, each player may stand pat or draw cards until:
- The player gets a total greater than 16, which is a bust and is an automatic loss.
 - The player is satisfied with their total.
 - The player has a total of four cards, at which point they must stand pat.
- § Any/all busted hands must remain down until the round is completed.
- § If a player's hand is a natural sixteen (i.e. two card pair of eights), they will show their hand and automatically win the pot unless another player has an eight-card showing. If there are multiple players with a natural sixteen, the pot will be split among them. Player(s) are still eligible to receive Bonus or Jackpot payouts which will be explained below.

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- § When all players have completed their hands, the dealer will reveal each player's cards to determine the winning hand as follows:
 - For all busted hands, the house collects their main wager from the pot.
 - Otherwise, the player with the closest score to 16 without busting will win the pot. If there is a tie, the pot will be split among them.
 - In addition to the pot, each player with a non-busted hand is eligible to receive a Bonus or Jackpot payout.
- § Bonus payouts for the non-busted hands:
 - A Three of a Kind has a payout of 1 to 1.
 - A Four of a Kind has a payout of 10 to 1.
-  § Jackpot payouts for the non-busted hands:
 - An Unsuted Four of a Kind hand comprised of all 4's has a payout of \$1,600.00.
 - A Suited Four of a Kind hand comprised of all 4's has a payout of \$16,000.00.
-  § Only the highest payout will be awarded among the Bonus and Jackpot payouts. For example, a Suited Four of a Kind hand comprised of all 4's will only payout \$16,000.00, not \$16,000.00 and 10 to 1 for a Four of a Kind.
- § Please note the Bonus and Jackpot payouts are only available for the Player versus Player scenario and not for the Player versus Dealer scenario.

Scenario 2 – Player versus Player side bets

- § When there are two (2) or more players with active main wagers, they have the option to place a side bet where they will challenge one another to see who has the winning hand.
- § Walk up players (players without an active main wager) can also place a side bet in the same manner except they are betting on a player with an active main wager, not themselves. The number of walk up players is limited to the number of available seats at the table. For example, if there are two (2) active players, there are four (4) available seats for Walk up players.
- § The maximum bet for a \$10.00 table is \$100.00, \$25.00 table is \$250.00, \$50.00 table is \$500.00, and \$100.00 is \$1000.00.
- § All side bets are between the players and not the house. The house does not collect any side bets after a player bust, therefore there are no mathematical results documented for the side bets.

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3. COMPLIANCE EVALUATION DETAILS

The following table details the relevant information for the mathematical pay percentages for the game: Jackpot 16.

Game Details for Jackpot 16 – Player vs Dealer – 6 Decks:

Hand	Probability	Pay (to 1)	EV
Player Wins - Natural 88	0.01485870	1	0.01485870
Player Wins - Other	0.40677956	1	0.40677956
Push	0.11280569	0	0.00000000
Player Loss - Dealer 88	0.01485870	-1	-0.01485870
Player Bust	0.17252051	-1	-0.17252051
Player Loss - Other	0.27817684	-1	-0.27817684
House Edge			4.39%
RTP			95.61%

Game Details for Jackpot 16 – Player vs Dealer – 8 Decks:

Hand	Probability	Pay (to 1)	EV
Player Wins - Natural 88	0.01499035	1	0.01499035
Player Wins - Other	0.40664491	1	0.40664491
Push	0.11275185	0	0.00000000
Player Loss - Dealer 88	0.01499035	-1	-0.01499035
Player Bust	0.17236384	-1	-0.17236384
Player Loss - Other	0.27825870	-1	-0.27825870
House Edge			4.40%
RTP			95.60%

Game Details for Jackpot 16 – Player vs Player – 6 Decks:

Hand	Probability	Aggregate Pay (for 1)	EV
Player 1->Win->Four Suited 4's	0.00000044	16002	0.00708889
Player 1->Win->Four Unsuited 4's	0.00007523	1602	0.12051205
Player 1->Win->Four of a Kind	0.00001632	13	0.00021220
Player 1->Win->Three of a Kind	0.00440394	4	0.01761576
Player 1->Win->Other	0.27978199	2	0.55956398

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Hand	Probability	Aggregate Pay (for 1)	EV
Player 1->Tie->Four Suited 4's	0.00000004	16001	0.00065604
Player 1->Tie->Four Unsited 4's	0.00000745	1601	0.01193225
Player 1->Tie->Four of a Kind	0.00004150	12	0.00049794
Player 1->Tie->Three of a Kind	0.00187031	3	0.00561093
Player 1->Tie->Other	0.11521265	1	0.11521265
Player 1->Lose->Four Suited 4's	0.00000002	16000	0.00035200
Player 1->Lose->Four Unsited 4's	0.00000316	1600	0.00505120
Player 1->Lose->Four of a Kind	0.00044485	11	0.00489332
Player 1->Lose->Three of a Kind	0.01242085	2	0.02484170
Player 1->Lose->Other	0.27141485	0	0.00000000
Player 1->Other Player Busts->Four Suited 4's	0.00000008	16000	0.00124800
Player 1->Other Player Busts->Four Unsited 4's	0.00001273	1600	0.02036320
Player 1->Other Player Busts->Four of a Kind	0.00007924	11	0.00087167
Player 1->Other Player Busts->Three of a Kind	0.00333838	2	0.00667677
Player 1->Other Player Busts->Other	0.13833014	0	0.00000000
Player 1->Busts	0.14177356	0	0.00000000
Player 1->Both Players Bust	0.03077227	0	0.00000000
House Edge			9.68%
RTP			90.32%

[1] Results are based on one billion simulated games.

Game Details for Jackpot 16 – Player vs Player – 8 Decks:

Hand	Probability	Aggregate Pay (for 1)	EV
Player 1->Win->Four Suited 4's	0.00000043	16002	0.00684886
Player 1->Win->Four Unsited 4's	0.00007569	1602	0.12126339
Player 1->Win->Four of a Kind	0.00001593	13	0.00020708
Player 1->Win->Three of a Kind	0.00440216	4	0.01760863
Player 1->Win->Other	0.27981530	2	0.55963061
Player 1->Tie->Four Suited 4's	0.00000006	16001	0.00092806
Player 1->Tie->Four Unsited 4's	0.00000753	1601	0.01205073
Player 1->Tie->Four of a Kind	0.00004152	12	0.00049819
Player 1->Tie->Three of a Kind	0.00186934	3	0.00560803

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Hand	Probability	Aggregate Pay (for 1)	EV
Player 1->Tie->Other	0.11519377	1	0.11519377
Player 1->Lose->Four Suited 4's	0.00000002	16000	0.00032000
Player 1->Lose->Four Unsited 4's	0.00000302	1600	0.00483040
Player 1->Lose->Four of a Kind	0.00044387	11	0.00488257
Player 1->Lose->Three of a Kind	0.01242233	2	0.02484466
Player 1->Lose->Other	0.27142624	0	0.00000000
Player 1->Other Player Busts->Four Suited 4's	0.00000008	16000	0.00121600
Player 1->Other Player Busts->Four Unsited 4's	0.00001257	1600	0.02011360
Player 1->Other Player Busts->Four of a Kind	0.00007884	11	0.00086729
Player 1->Other Player Busts->Three of a Kind	0.00334010	2	0.00668019
Player 1->Other Player Busts->Other	0.13832814	0	0.00000000
Player 1->Busts	0.14176324	0	0.00000000
Player 1->Both Players Bust	0.03075983	0	0.00000000
House Edge			9.64%
RTP			90.36%

[1] Results are based on one billion simulated games.

Top Award Details for Lucky Ladies with Dealer Envy:

Variation	Top Award	Top Award Odds	Top Award Description
Player vs Dealer - 6 Decks	1 to 1	1 in 3	Player Wins
Player vs Dealer - 8 Decks	1 to 1	1 in 3	Player Wins
Player vs Player - 6 Decks	16002 for 1	1 in 2,257,337	Player 1 Wins with Four Suited 4's
Player vs Player - 8 Decks	16002 for 1	1 in 2,336,449	Player 1 Wins with Four Suited 4's

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4. CHECKLISTS USED

The following table details the testing checklists used:

Checklist Number	Version	Checklist Description
AMS-NAM-CH-259	1.6	Game Math Checklist
AMS-NAM-CH-382	1.4	Math Evaluation Test Checklist
AMS-NAM-MO-382	1.4	Math Evaluation Method

5. PROJECT HISTORY

The following table details milestone dates of the project:

Date	Description
13/02/2018	Original Submitted Date
13/03/2018	Testing Start Date
13/04/2018	Testing Completion Date

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6. TERMS AND CONDITIONS

BMM Testlabs (“BMM”) has conducted a level of testing of the gaming product which has historically been adequate for a submission of this type. However, inherent in testing in a laboratory environment are the unavoidable limitations of not being able to verify the effects of all possible configurations and environments that occur in actual gaming venues.

This evaluation report is for use by the client for the jurisdiction (“Jurisdiction”) referenced in the report (the “Report”) and only verifies, as of the date stated, the gaming product described in the Report subject to any conditions or limitations set forth therein.

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Please feel free to contact BMM Testlabs if you have any questions in regards to this evaluation report.

Yours sincerely,



Travis Foley
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