

Summary Specifications

Sample Game Only KC4210

Base Game Profile

Prize	Hits	RTP
200	1	1.447%
100	2	1.447%
50	10	3.617%
20	72	10.417%
15	24	2.604%
12	80	6.944%
10	48	3.472%
8	45	2.604%
3	315	6.836%
2	1368	19.792%
	1965	59.180%

Total Symbols per Reel

Reel 1	Reel 2	Reel 3
24	24	24

Game Cycle
13824

Symbols
7
Crown (Cr)
Bell (Be)
Orange (O)
Melon (M)
Grapes (G)
Plum (P)
Cherry (Ch)

Base Game Prize Schedule

Combination	Prize
7.7.7	200
Cr.Cr.Cr	100
Be.Be.Be	50
O.O.O	20
M.M.M	15
G.G.G	12
P.P.P	10
Ch.Ch.Ch	8
Ch.Ch. --	3
Ch. -- . --	2

Game Rules		
1	Multi-Line game	
2	Base Prizes are multiplied by the number of credit units staked per line	
3	Wins on different activated playlines are added	

Free Games Feature

- 1 A number of free games are triggered whenever the defined trigger event occurs
- 2 The trigger event is the appearance, in scattered format, of 'Crown.Grapes.7' on the 1st, 2nd and 3rd reels respectively
- 3 Free Games are played on the number of lines and at the bet level of the game in which the trigger event occurred
- 4 Immediately following the trigger event, 3 Hold and Spin free games are played. Whenever a '7' symbol appears in the play window, the reel or reels on which it appears are held and the others are re-spun. There are a total of 3 Hold and Spin plays.
- 5 The outcome of the Hold and Spin routine determines how many free games are played AND what prize multiple is applied

The number of '7s' that have appeared at the end of the Hold and Spin routine determines the number of free games and the prize multiple as follows:

# 7s	Free Games	Prize Uplift
0	7	3
1	12	4
2	15	5
3	20	6

- 6 The same reel strips and base prize schedule are played in the free game feature as in the base game.
- 7 The 'Hold and Spin' followed by free games **CAN BE RE-TRIGGERED** during free game play.
- 8 The game can be structured at customer's specifications to adjust the feature games to simply vary the number of free games with the same prize-uplift value; to have the same number of free games but with varying prize-uplift multiples or it can be applied to simply varying the prize-uplift value during any stage of the base game play for a random number of subsequent plays (which would not be free to the player).

CAUTION

The sample game illustrated in these notes may breach varying regulatory parameters. Customers will need to specify the limit parameters to satisfy any regulatory rules.

The feature described here is highly flexible and can be adjusted to satisfy most limitations including prize to bet ratios that apply in some jurisdictions.

Selected Game Properties

Base Game RTP	59.18%	
Feature Game RTP	<u>31.48%</u>	
Total Game RTP	<u>90.66%</u>	
Average Hit Rate for a Prize		
Base Game	7.03	14.2%
Total Game	6.25	16.0%
Game Standard Deviation	5.88	
Average No. games for Feature Trigger to occur		
Base Game	102.4	
Total Game	90.96	

Magic 7's - Sample Game 90.66%

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Sample Game ONLY - not for sale

Summary Specifications Magic 7's Video Format Sample Game Only

Base Game Profile

Total Symbols per Reel

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Base Game	102.4	
Total Game	90.96	

Sample Game ONLY - not for sale

Base Game Calculations

Symbol Distribution

Symbol Distri	Reel 1	Reel 2	Reel 3	
7	1	1	1	
Crown (Cr)	1	1	2	
Bell (Be)	5	1	2	
Orange (O)	4	3	6	
Melon (M)	2	4	3	
Grape (G)	4	5	4	
Plum (P)	4	4	3	
Cherry (CH)	3	5	3	Cycle
	<u>24</u>	<u>24</u>	<u>24</u>	13824

Combination				Hits	Prize	Payout	RTP
7.7.7	1	1	1	1	200	200	1.447%
Cr.Cr.Cr	1	1	2	2	100	200	1.447%
Be.Be.Be	5	1	2	10	50	500	3.617%
O.O.O	4	3	6	72	20	1440	10.417%
M.M.M	2	4	3	24	15	360	2.604%
G.G.G	4	5	4	80	12	960	6.944%
P.P.P	4	4	3	48	10	480	3.472%
CH.CH.CH	3	5	3	45	8	360	2.604%
CH.CH. --	3	5	21	315	3	945	6.836%
CH. --. --	3	19	24	<u>1368</u>	2	<u>2736</u>	<u>19.792%</u>
				<u>1965</u>		<u>8181</u>	<u>59.180%</u>
				Base Game Hit Rate	7.0351		
					14.21%		

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Base Game Feature Triggers occur whenever CROWN. GRAPE. 7 occur on reels 1, 2 and 3 respectively ANYWHERE in the Play window

The distribution of these symbols on the respective Reels is:

	Reel 1	Reel 2	Reel 3
Crown	1		
Grape		5	
7			1

Each can occur in any one of three possible positions, the calculation of the Base Game Triggers is:

$$3 \times 15 \times 3 = 135$$

	Reel 1	Reel 2	Reel 3	Cycle
Stops	24	24	24	13824
Symbols	3	3	3	
Non-Symbols	21	21	21	

Trigger - scattered anywhere in window: Crown.Grape.7

Base Game Feature Triggers				
Any 3 Scattered Symbols				
3 Kind	3	15	3	<u>135</u>
				<u><u>135</u></u>
	Hit Rate			102.40
	Probability			0.009765625

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Spinning 3 Reels - Zero Hits

			Events	Probability
21	21	21	9261	0.669921875

Spinning 3 Reels - 1 Hit

3	21	21	1323	
21	3	21	1323	
21	21	3	1323	
			<u>3969</u>	0.287109375

Spinning 3 Reels - 2 Hits

3	3	21	189	
3	21	3	189	
21	3	3	189	
			<u>567</u>	0.041015625

Spinning 3 Reels - 3 hits

3	3	3	27	0.001953125
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Denominator for 2 reel spin

1	24	24	576	
24	1	24	576	
24	24	1	576	
			<u>1728</u>	

Sample Game ONLY - not for sale

Spinning 2 Reels - 0 hits

1	21	21	441	
21	1	21	441	
21	21	1	441	
			<u>1323</u>	0.765625
			<u><u>1323</u></u>	

Spinning 2 Reels - 1 hit

1	3	21	63	
1	21	3	63	
21	1	3	63	
3	1	21	63	
3	21	1	63	
21	3	1	63	
			<u>378</u>	0.21875
			<u><u>378</u></u>	

Spinning 2 Reels - 2 Hits

1	3	3	9	
3	1	3	9	
3	3	1	9	
			<u>27</u>	0.015625
			<u><u>27</u></u>	

Denominator for 1 Reel Spin

1	1	24	24	
1	24	1	24	
24	1	1	24	
			<u>72</u>	
			<u><u>72</u></u>	

Sample Game ONLY - not for sale

Spinning 1 Reel - 0 Hits

1	1	21	21	
1	21	1	21	
21	1	1	21	
			<u>63</u>	0.875
			<u><u>63</u></u>	

Spinning 1 Reel - 1 Hit

1	1	3	3	
1	3	1	3	
3	1	1	3	
			<u>9</u>	0.125
			<u><u>9</u></u>	

Sample Game ONLY - not for sale

Initial State Probability Vector

Reels Spun	Possible Outcomes				Test Check
	0	1	2	3	
3	0.669921875	0.287109375	0.041015625	0.0019531	1
2	0	0.765625	0.21875	0.015625	1
1	0	0	0.875	0.125	1
0	0	0	0	1	1

Using simple 'Markov Chain' methodology

Spin 1 Transition Matrix 0.669921875 0.287109375 0.041015625 0.0019531

Spin 2 Matrix 0.448795319 0.412158966 0.126171112 0.0128746

Spin 3 Matrix 0.300657801 0.444412552 0.218967117 0.0359625

Base Game Triggers = 135

Therefore, outcomes	0	1	2	3	
after 3 Hold & Spins	40.58880318	59.9956945	29.56056084	4.8549415	135

Free Games per Category	7	12	15	20
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Total Free Games	284.1216223	719.9483339	443.4084127	97.09883	1544.577198
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Sample Game ONLY - not for sale

Because Triggers can re-trigger during free games, we need to calculate this effect (a form of geometric progression).

Game Cycle	13824
Base Game RTP	59.180%
Feature RTP	59.180%

Category	Base Game Triggers	Free Games	Total Base Games	Progression Determinant	Total Re-Triggers	Total Triggers	Total Games	Prize Uplift	Feature RTP Value
0	40.58880318	7	284.1216223	0.888268432	5.1054957	45.69429885	319.8600919	3	4.108%
1	59.9956945	12	719.9483339	0.888268432	7.5466073	67.54230179	810.5076215	4	13.879%
2	29.56056084	15	443.4084127	0.888268432	3.7182992	33.27886007	499.182901	5	10.685%
3	4.85494148	20	97.0988296	0.888268432	0.6106828	5.465624248	109.312485	6	2.808%
	<u>135</u>		<u>1544.577198</u>		<u>16.981085</u>	<u>151.981085</u>	<u>1738.863099</u>		<u>31.480%</u>
	Probability (p)		0.111731568						
	1 - p		0.888268432			Hit Rate			
	102.40		151.981085			90.95868742			

Total Game RTP

Base Game	59.180%
Feature Game	<u>31.480%</u>
	<u>90.660%</u>

Base Game Profile			Feature Games Profiles											
Prize	Hits	RTP	Feature 1	Hits	RTP	Feature 2	Hits	RTP	Feature 3	Hits	RTP	Feature 4	Hits	RTP
200	1	1.447%	600	0.023138027	0.100%	800	0.05863047	0.339%	1000	0.036109874	0.261%	1200	0.007907	0.069%
100	2	1.447%	300	0.046276055	0.100%	400	0.117260941	0.339%	500	0.072219748	0.261%	600	0.015815	0.069%
50	10	3.617%	150	0.231380275	0.251%	200	0.586304703	0.848%	250	0.361098742	0.653%	300	0.079074	0.172%
20	72	10.417%	60	1.665937979	0.723%	80	4.221393862	2.443%	100	2.599910943	1.881%	120	0.569336	0.494%
15	24	2.604%	45	0.55531266	0.181%	60	1.407131287	0.611%	75	0.866636981	0.470%	90	0.189779	0.124%
12	80	6.944%	36	1.851042199	0.482%	48	4.690437625	1.629%	60	2.888789936	1.254%	72	0.632595	0.329%
10	48	3.472%	30	1.110625319	0.241%	40	2.814262575	0.814%	50	1.733273962	0.627%	60	0.379557	0.165%
8	45	2.604%	24	1.041211237	0.181%	32	2.638371164	0.611%	40	1.624944339	0.470%	48	0.355835	0.124%
3	315	6.836%	9	7.288478657	0.475%	12	18.46859815	1.603%	15	11.37461037	1.234%	18	2.490844	0.324%
2	1368	19.792%	6	31.6528216	1.374%	8	80.20648338	4.642%	10	49.39830791	3.573%	12	10.81738	0.939%
	1965	<u>59.180%</u>		45.466224	<u>4.108%</u>		115.2088742	<u>13.879%</u>		70.95590281	<u>10.685%</u>		15.53812	<u>2.808%</u>

Sample Game ONLY - not for sale

Total Game Prize/Frequency/RTP Profile	1200	0.007907442	0.069%
	1000	0.036109874	0.261%
	800	0.05863047	0.339%
	600	0.038952912	0.169%
	500	0.072219748	0.261%
	400	0.117260941	0.339%
	300	0.12535048	0.272%
	250	0.361098742	0.653%
	200	1.586304703	2.295%
	150	0.231380275	0.251%
	120	0.569335859	0.494%
	100	4.599910943	3.327%
	90	0.18977862	0.124%
	80	4.221393862	2.443%
	75	0.866636981	0.470%
	72	0.632595399	0.329%
	60	6.341416442	2.752%
	50	11.73327396	4.244%
	48	5.046272537	1.752%
	45	0.55531266	0.181%
	40	4.439206914	1.284%
	36	1.851042199	0.482%
	32	2.638371164	0.611%
	30	1.110625319	0.241%
	24	1.041211237	0.181%
	20	72	10.417%
	18	2.490844384	0.324%
	15	35.37461037	3.838%
	12	109.2859795	9.487%
	10	97.39830791	7.046%
	9	7.288478657	0.475%
	8	125.2064834	7.246%
	6	31.6528216	1.374%
	3	315	6.836%
	2	1368	19.792%
		<u>2212.169125</u>	<u>90.659%</u>

Game Hit Rate	6.249
Standard Deviation	5.8785549

Reel Strips

	Reel 1	Reel 2	Reel 3
1	7	7	7
2	Bell	Grapes	Orange
3	Orange	Melon	Crown
4	Grapes	Cherry	Grapes
5	Plum	Plum	Cherry
6	Bell	Grapes	Orange
7	Cherry	Orange	Bell
8	Grapes	Melon	Plum
9	Plum	Cherry	Melon
10	Bell	Crown	Orange
11	Melon	Grapes	Grapes
12	Cherry	Plum	Bell
13	Plum	Orange	Orange
14	Bell	Cherry	Melon
15	Grapes	Grapes	Plum
16	Orange	Melon	Orange
17	Melon	Plum	Cherry
18	Plum	Bell	Crown
19	Bell	Cherry	Grapes
20	Crown	Grapes	Orange
21	Orange	Melon	Plum
22	Cherry	Plum	Melon
23	Grapes	Orange	Cherry
24	Orange	Cherry	Grapes

Symbol Distribution Check

	Reel 1	Reel 2	Reel 3
7	1	1	1
Crown	1	1	2
Bell	5	1	2
Orange	4	3	6
Melon	2	4	3
Grapes	4	5	4
Plum	4	4	3
Cherry	3	5	3
	<u>24</u>	<u>24</u>	<u>24</u>

Sample Game ONLY - not for sale

Game Volatility Properties

Total Game RTP 90.66%
Standard Deviation 5.8785549
C.I 95%

Expected RTP Limits		
Games	Low	High
10000	79.14%	102.18%
20000	82.51%	98.81%
30000	84.01%	97.31%
50000	85.51%	95.81%
100000	87.02%	94.30%
200000	88.08%	93.24%
300000	88.56%	92.76%
400000	88.84%	92.48%
500000	89.03%	92.29%
600000	89.17%	92.15%
700000	89.28%	92.04%
800000	89.37%	91.95%
900000	89.44%	91.87%
1000000	89.51%	91.81%
1100000	89.56%	91.76%
1200000	89.61%	91.71%
1300000	89.65%	91.67%
1400000	89.69%	91.63%
1500000	89.72%	91.60%
1600000	89.75%	91.57%
1700000	89.78%	91.54%
1800000	89.80%	91.52%
1900000	89.82%	91.50%
2000000	89.84%	91.47%

Operator's Risk Table

Player Return 90.659%
 Std.Dev. 5.879

Operator's Risk Table					
Games Played	Probability of Operator loss within the ranges and at the play rates shown				Possibility of Payouts exceeding 100%
	0 to 2 %	2 to 4 %	4% to 6%	6% +	
	of total bet	of total bet	of total bet	of total bet	
5,000	0.044336	0.031983	0.021780	0.032498	13.060%
10,000	0.029180	0.015232	0.007090	0.004532	5.603%
15,000	0.016753	0.006347	0.002026	0.000696	2.582%
30,000	0.002543	0.000374	0.000039	0.000003	0.296%
50,000	0.000182	0.000008	0.000000	0.000000	0.019%
100,000	0.000000	0.000000			0.000%
200,000					0.000%
300,000					0.000%
400,000					0.000%
500,000					0.000%
600,000					0.000%
1,600,000					0.000%
2,600,000					0.000%
3,600,000					0.000%
4,600,000					0.000%
10,000,000					0.000%