RGS EVALUATION TESTING REPORT

Reference regulation:

Republic of Estonia - Estonian Tax and custom board, Gambling Supervision

Gambling Act

Passed 15.10.2008 - RT I 2008, 47, 261

(with amendments adopted by Parliament up to 11.02.2015 RT I, 04.03.2015, 3)

Game: Luchadora [RTP 96.20%]
Version:
1.0.2, (HTML5 interface, desktop and mobile)
1.0.0, (Server)
3.5.0, (RNG)

21/04/2017

QUINEL M Limited
Marina Court, Flat 8, Triq Giuseppe Cali', XBX 1421 Ta'Xbiex - Malta
info@quinel.com.mt

INTRODUCTION

The findings reported in this summary are the results of a broader set of documents and testing activities results archived in Quinel M's facilities. It is intended that the requester declares that:

- Any Hardware provided or described for analysis and testing is configured identically to hardware in commercial use
- Game software/ function provided for the testing and code review is declared by the customer to have the same behavior to the software/code in commercial use
- Functionality made by the software in automatic test mode has a realistic behavior

and that

- all the files and modules,
- the database schemas and all the specific programming resources,
- all the parameters contained into any databases and/or configuration file

that have been subject to the audit process guarantee the same behavior of what is going to be published/deployed according to this audit results.

The Recipient, by accepting and using this Report, declares to be aware and accept unconditionally all the terms and conditions set forth. If the Applicant and / or the Recipient does not agree on the terms and conditions set forth, Quinel M Ltd reserves the right to cancel the certification provided with this Report, it follows therefore that the Recipient must immediately return all copies to Quinel M Ltd of this Report and cannot use them nor refer to.

Any copy of this test reports and calibration certificates must also include the page number and total number of pages.

Copy of this test report must not be reproduced except in full, without written approval of the laboratory.

A) Audit ID

ET J17030192_G001_Luchadora_HTML5 rev. 1

B) Scope / Document type

GAME evaluation testing report

C) Reference regulation

Republic of Estonia – Estonian Tax and custom board, Gambling Supervision

Gambling Act Passed 15.10.2008 - RT I 2008, 47, 261

(with amendments adopted by Parliament up to 11.02.2015 RT I, 04.03.2015, 3)

Technical and functional requirements for the game software and communication equipment for remote gambling:

- "Organisation of Remote Gambling", section 2 clause 8 (https://www.emta.ee/eng/business-client/excise-duties-assets-gambling/organisation-remote-gambling)

D) Test methods

Ref. to Operative Instruction IO 02-02 for definitions

Randomness:
QIRT000/1/2, ERT001/2, QIMT001
Visual inspection
QIVI001
Software Source Inspection:
QISI001
Accounting And Financials:
QIAF001

E) Auditor / Test lab

Quinel M. LTD
Reference contact:
Mr Isacco Ceci
Email: isacco.ceci@quinel.com.mt

Marina Court, Flat 8,
Triq Giuseppe Cali'
XBX 1421 Ta'Xbiex - Malta
Email: info@quinel.com.mt

F) Audit subject

Description: compliance of the following test items

Test Items: Games (video slot games)

Test Item	*Game Name*	*Version*	*Interface*
G001	Luchadora	release: 1.0.2 server: 1.0.0 RNG: 3.5.0	HTML5 (Desktop and mobile)

Receipt date:
31/03/2017 – submission for testing against current regulation as per Section (C) of all items

Inspection date:
31/03/2017 – 21/04/2017
Note 1: Compliance of the RNG used by the test items was certified through report with ID "J16030078_RNG_rev.1_ESTONIA" issued and signed by Quinel M. LTD, dated March 25th, 2016.

G) Requester

Thunderkick Malta LTD
Level 5, The Mall Complex,
Floriana, Malta

H) Owner of the system/software

Tabrake AB
EKBACKSVÄGEN 59 A
184 32 Åkersberga
Stockholms län - Sweden

I) Companies and organizations involved in the process

Producer(s) / Integrator(s): Ref. to Section H)

Requester: Ref. to Section G)

Licensee/Operator: N.A.

J) Individuals involved in the process

On the Producer(s) / Integrator(s) side: Mr. Sven Grip (CEO), Stéphane Redon (Software architect and developer), Johnny Aspelin (Software architect and developer), Daniel Gjörwell (Software architect and developer)

On the Requester side: same as for Producer

On the Licensee/Operator side: N.A.

On Quinel M LTD side: Enrico Piccinini (Lab Manager - Malta), Davide De Nobile (Lab Manager – Italy)

K) Processes, rules and parameters of the games (if applicable)

Rules of the games/test are reported with details into Annex II.
Here follows the theoretical payout of the test items:

Test Item	*Test Item / Game name*	*Theor. RTP [%]*
G001	Luchadora	96.20%

L) Protocols and specifications of the gaming system (if applicable)

Both games (server side logic) and platform are developed entirely with the Java Language.

Games were provided through the following URLs on a QA environment:

- http://game.thunderkick.com:9090/static/games/quinel_lucha.html (player's interface)
- https://qa-int-backoffice.thunderkick.com (Back office / Admin interface)
- http://ext-qa-gameservice.thunderkick.com (Runtime game configuration)

The QA environment used for testing relies on a Linux environment hosted by Amazon's cloud services and runs on Oracle Java JDK 1.7.0_09, Apache Tomcat application server 7.0.42

Live environment is reachable at the following IPs (primary site, secondary site omitted):

Game traffic:	37.114.73.113
API:	37.114.73.114
Back office	37.114.73.115
Firewall	37.114.73.120

Live environment servers are running Linux "Ubuntu 12.04.5 LT; Precise Pangolin", with Oracle Java JDK 1.7.0_51, Apache Tomcat application server 7.0.50.

Simulation environment used a virtualized server with the same Linux distribution "Ubuntu 12.04.5 LT; Precise Pangolin" with Oracle Java JDK 1.7.0_76 – no application server was required.

The difference between the Java JDK is negligible considered the change log and that the source code inspection couldn't find any specific binding to those releases nor dependencies on system APIs. Same considerations apply with regards to differences between QA and Live environment

The simulation tool verified (class '*com.thunderkick.game.simulation.Boot*', package '*thunderkick-game-simulation.jar*') extracts the configurations for the games for a repository synchronized with the live production environment and uses the same Java archives subject to deployment.

It was verified that the environment used for testing and the live one were using the same Java classes to ensure the objectives of the testing strategy. Checksums can be verified here:

QA environment:
http://ext-qa-gameservice.thunderkick.com/hash?output=plain&algorithm=SHA1&rng=true&jar=true&properties=true

Live environment:
http://37.114.73.113/hash?output=plain&algorithm=SHA1&rng=true&jar=true&properties=true

M) Security of the system

N.A.

N) Evaluation performed

The test evaluation, required by the Requested, was completed against the following requirements:

Republic of Estonia – Estonian Tax and custom board, Gambling Supervision
Gambling Act Passed 15.10.2008 - RT I 2008, 47, 261 (with amendments adopted by Parliament up to 11.02.2015 RT I, 04.03.2015, 3)

Refer to the Annex I report for a full detailed list of requirements tested.

O) Evaluation auxiliary informations

N.A.

P) Testing activities applied and product / test items references

Internal procedure followed:
Rif. "IOP 02-02 TEST METHODS"

Tests were performed against the following files:

SHA1	*Critical*	*Type (Game)*	*Test item*	*File name*
83a70cd9685d81024b4a5bd4fa5f16424fd98a7c	Yes	Configuration	Luchadora	gp-game-s1-g11.json
832aa696d0ff56880f66ad50ec58646c3b84a407	Yes	Game Logic	Luchadora	gp-game-s1-g11-core-1.0.0-RELEASE.jar
f2dcd4e8ed46eb5653d99ff54f60c4e4047ad4ec	Yes	RNG	All	rng-implementation\ gp-rng-3.5.0-RELEASE.jar
ea01386be069745202580bd50c3de32c33f3553f	Yes	RNG	All	rng-API\ gp-rng-api-3.5.0-RELEASE.jar
d5e01a5f41deae3b63b46b2ccb7125278e3ebc29	Yes	RNG (*)	All	gp-rng\...\MersenneTwister32.java
ea8940a1cd7d561eb944c42f101ddfcd7cce2ec7	Yes	RNG (*)	All	gp-rng-api\...\RandomNumberGenerator.java

(*) – RNG main source code files.

Q) Critical modules affecting the behavior of the test items

Refer to Section P, column "Critical"

R) Additional information

N.A.

S) Setup and application/system architecture tested

Refer to section L.

T) Payout (if applicable)

Refer to section K.
No specific conditions / strategy to obtain the declared payout are to be considered.

U) CERTIFICATION

Date: 21/04/2017 Total Number of Pages: **23**

Requester: Thunderkick Malta LTD
Level 5, The Mall Complex - Floriana, Malta

Licensee: N.A.

QUINEL M LTD certifies that the games

G001: "Luchadora"
Revision: 1.0.2, (HTML5 interface, Desktop and Mobile)
Server version: 1.0.0
RNG version: 3.5.0

examined and identified at Section F) comply with the Gambling Act - Republic of Estonia Passed 15.10.2008 - RT I 2008, 47, 261 with amendments adopted by Parliament up to 11.02.2015 RT I, 04.03.2015, 3. Ref. to Section C for full regulatory scope).

Refer to Annex I for the full list of requirement satisfied.

V) CONDITIONS AND VALIDITY

Conditions: none
Extents set by the State Gambling Commission: none
Validity period: upon next changes to critical files listed in section P)

W) CONCLUSIONS

QUINEL M LTD certifies that the games tested complies with the Technical Standards requested when integrated with the RNG certified and identified into compliance Report ID "J16030078_RNG_rev.1_ESTONIA" issued and signed by Quinel M. Ltd, dated March 25th, 2016 and recommends for approval.

Date: 21/04/2017

Signed:

Isacco Ceci – CEO
QUINEL M. LTD

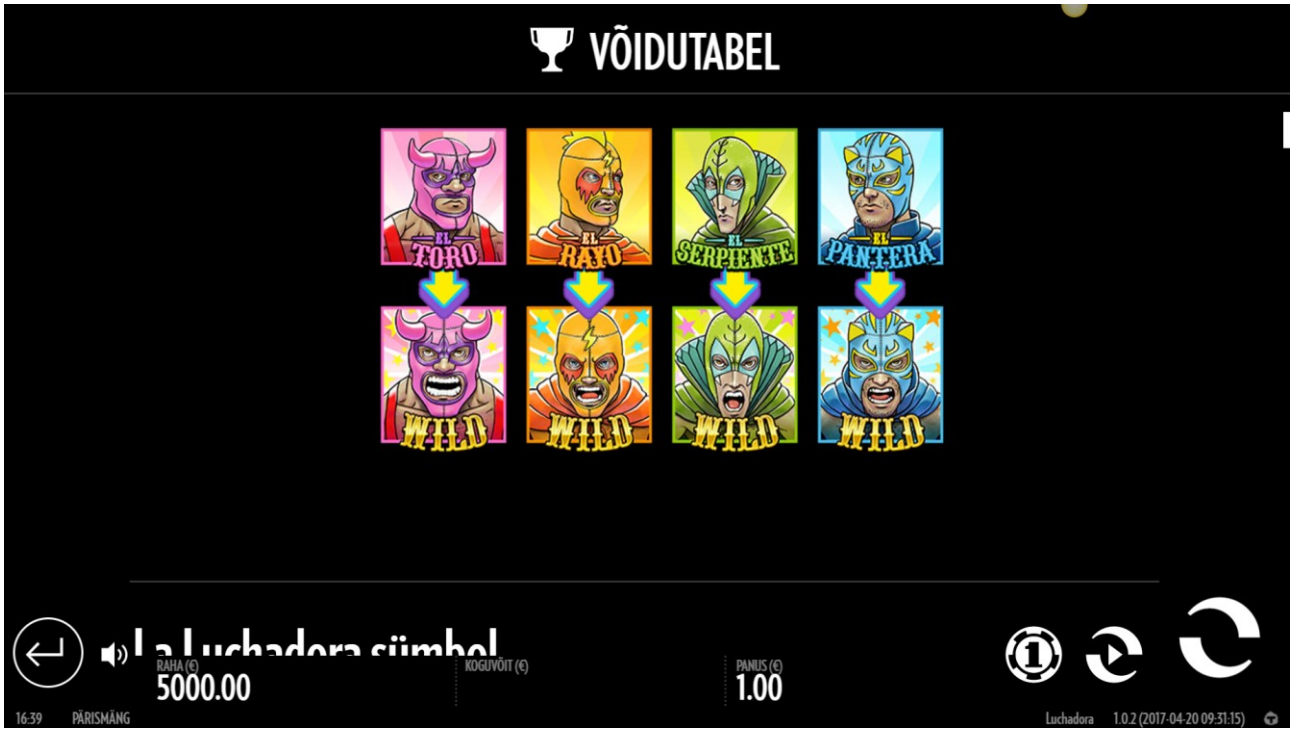
ANNEX REPORT - I

Requirements		Notes	Result (PASS / FAIL / N.A.)
Code	**Req.**		
Section 2	***Organisation of Remote Gambling Requirements***		
Clause 2	The software and hardware to be used for organising remote gambling must ensure that an average sum of prizes made for gamblers as a result of gambling is exceeding 80 per cent of all credits.	The theoretical RTP of the game is 96.20%.	**PASS**
Clause 8. (1)	Randomness of determining the outcome of a game cannot be influenced	-	**PASS**
Clause 8. (2)	Data of significant importance shall be stored if the game is interrupted	-	**PASS**
Clause 8. (3)	Interruptions of a game, results and any alterations in the gaming system shall be recorded	-	**PASS**
Clause 8.1	Record in a log file the entry into the system and exit from the system and the time of making of alterations and the maker of alteration to the system	-	**PASS**
Clause 8.2	The data specified in sub clauses 2 and 3 of clause 8 shall be stored at least five years	-	**PASS**

ANNEX II

Game Rules / Pay Table

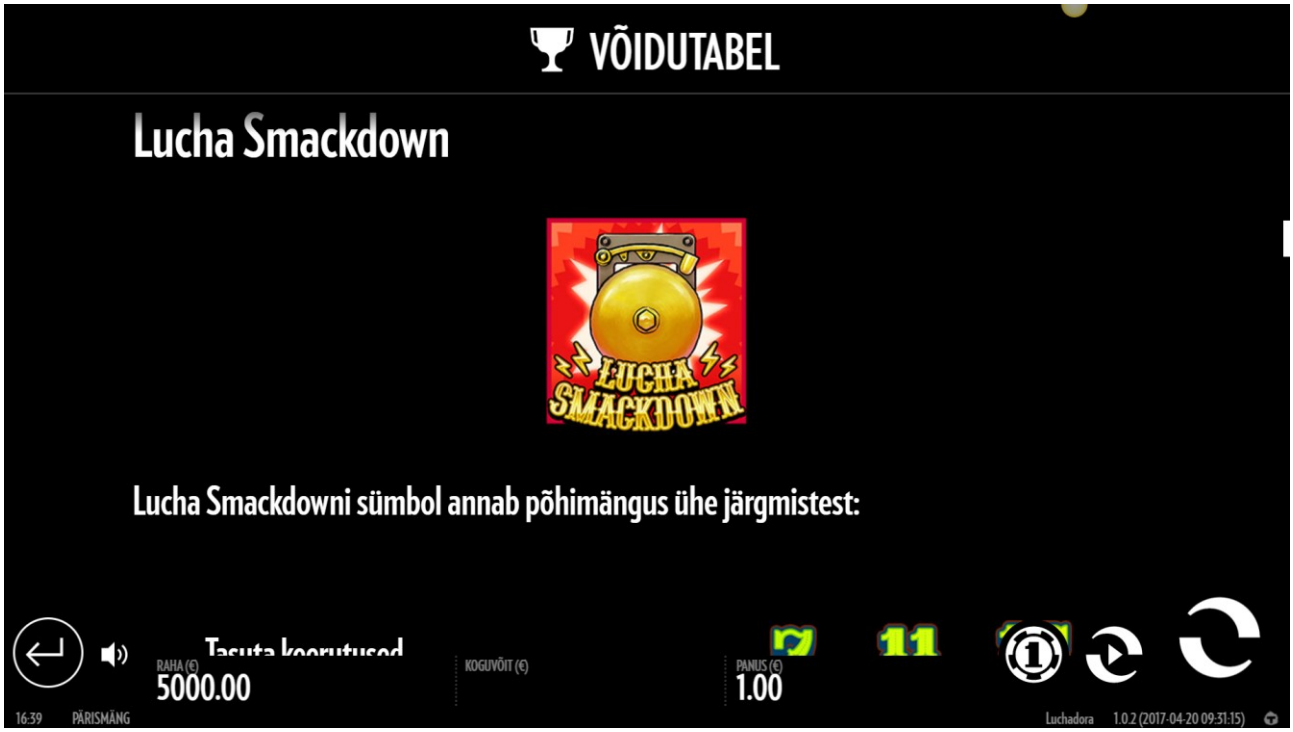
GAME: Luchadora – Desktop


VÕIDUTABEL
EL TORO
EL RAYO
EL SERPIENTE
EL PANTERA
WILD
WILD
WILD
WILD
RAHA (€)
5000.00
KOGUVÕIT (€)
PANUS (€)
1.00
16:39
PÄRISMÄNG
Luchadora 1.0.2 (2017-04-20 09:31:15)

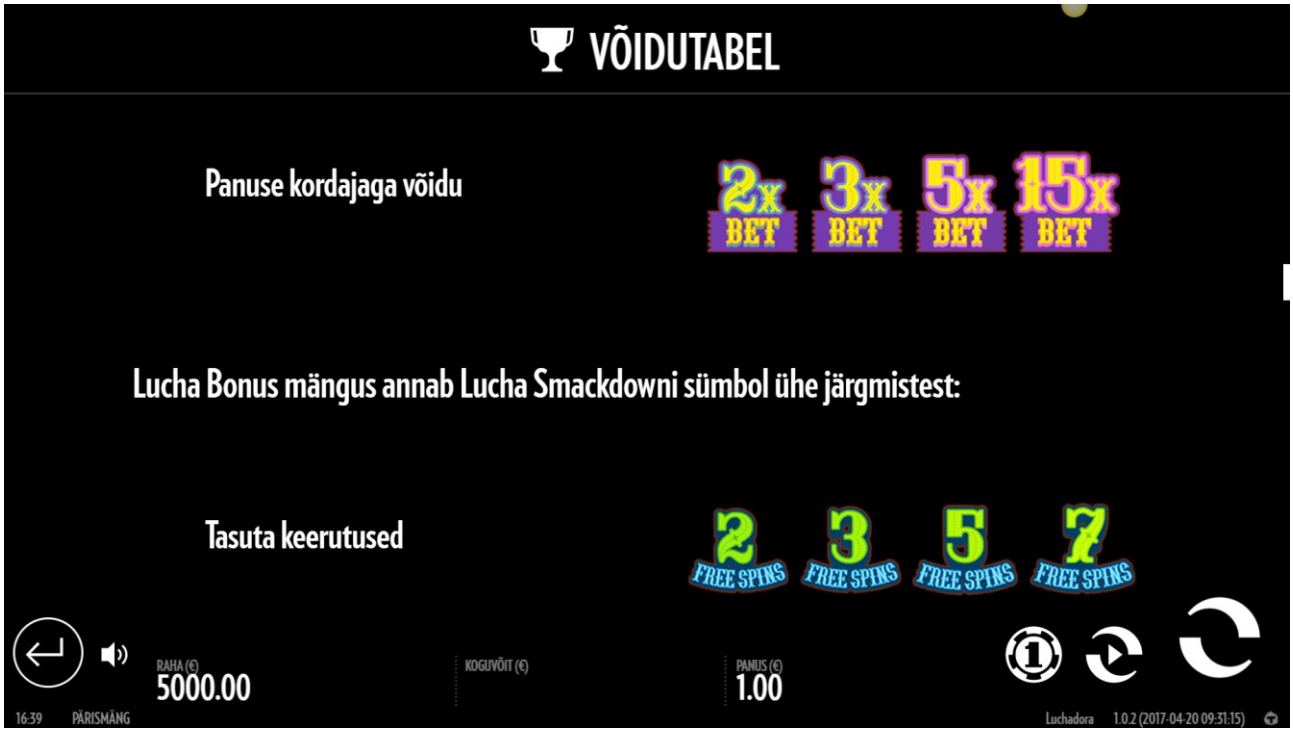
VÕIDUTABEL
La Luchadora sümbol
Allajääjasümbol teisendub La Luchadora sümboliks, kui kõik 4 erinevat maadlejasümbolit on Lucha Bonus mängus wild-sümboliteks muutunud.
MISTERIOSO
CAMPEÓN
LA LUCHADOR
RAHA (€)
5000.00
KOGUVÕIT (€)
PANUS (€)
1.00
16:39
PÄRISMÄNG
Luchadora 1.0.2 (2017-04-20 09:31:15)

VÕIDUTABEL
Lucha Bonus mängus wild-sümboliteks muutunud.
LA LUCHADORA
Ringinurgad
Mängus on kokku 4 ringinurka. Kui maadlejasümbol peatub
RAHA (€)
5000.00
KOGUVÕIT (€)
PANUS (€)
1.00
16:39
PÄRISMÄNG
Luchadora 1.0.2 (2017-04-20 09:31:15)

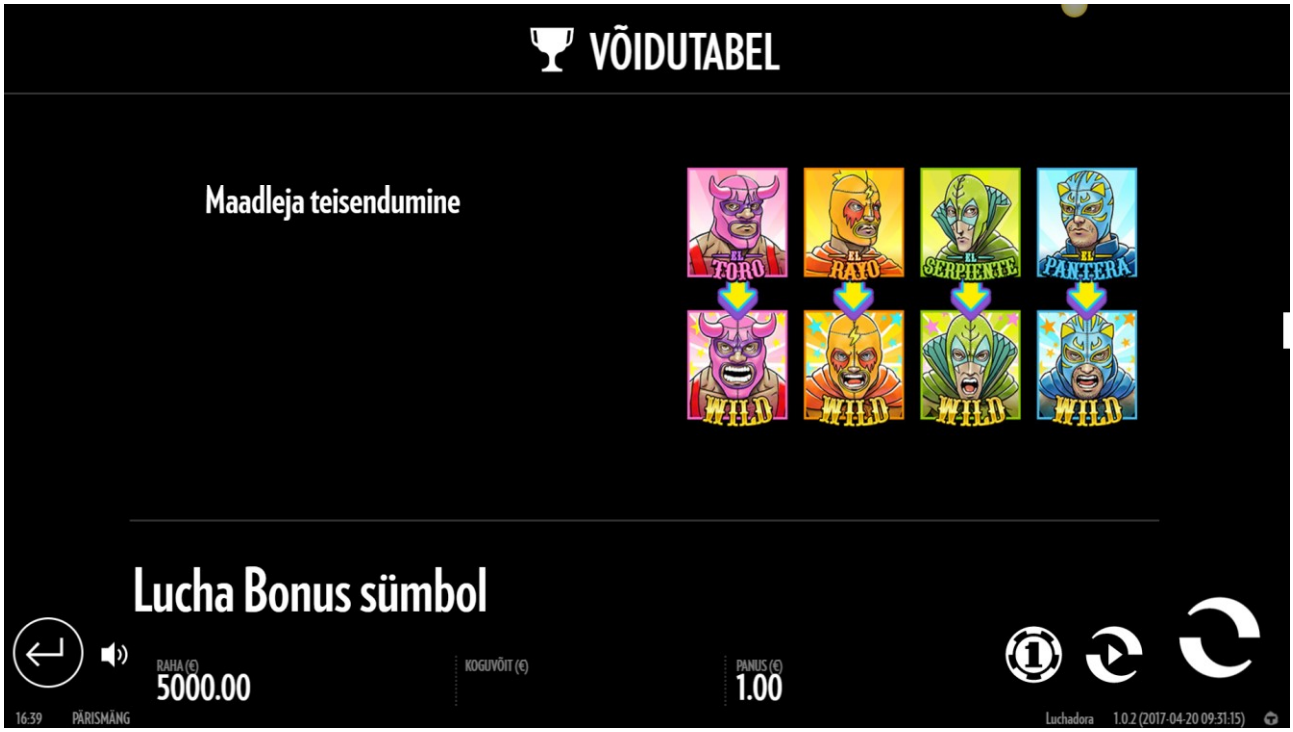
VÕIDUTABEL
Ringinurgad
Mängus on kokku 4 ringinurka. Kui maadlejasümbol peatub ringinurgas, asendab see kõik sama värvi maadlejad wild-sümbolitega.
RAHA (€)
5000.00
KOGUVÕIT (€)
PANUS (€)
1.00
16:39
PÄRISMÄNG
Luchadora 1.0.2 (2017-04-20 09:31:15)


VÕIDUTABEL
Lucha Smackdown
LUCHA SMACKDOWN
Lucha Smackdowni sümbol annab põhimängus ühe järgmistest:
Tasuta keerutused
RAHA (€)
5000.00
KOGUVÕIT (€)
PANUS (€)
1.00
11
16:39
PÄRISMÄNG
Luchadora 1.0.2 (2017-04-20 09:31:15)

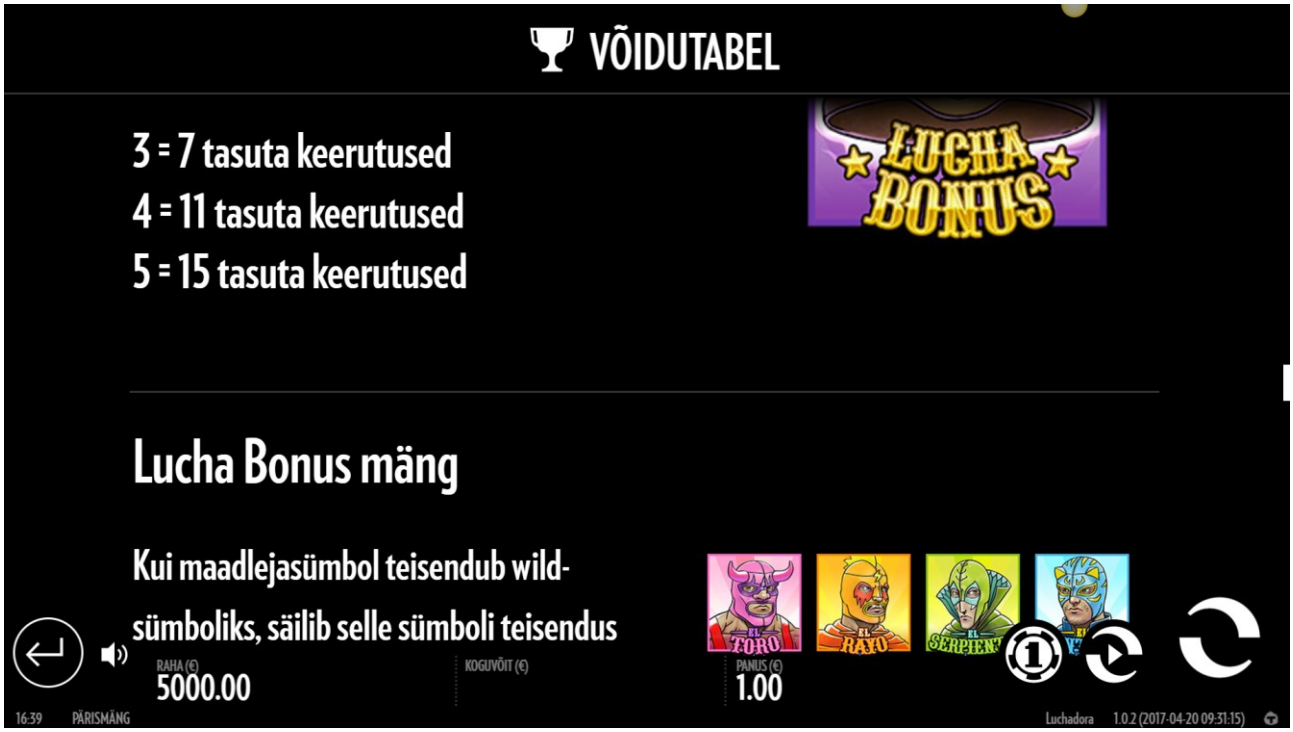
VÕIDUTABEL
Tasuta keerutused
7 FREE SPINS
11 FREE SPINS
15 FREE SPINS
Panuse kordajaga võidu
2x BET
3x BET
5x BET
15x BET
Lucha Bonus mängus annab Lucha Smackdowni sümbol ühe järgmistest:
RAHA (€)
5000.00
KOGUVÕIT (€)
PANUS (€)
1.00
16:39
PÄRISMÄNG
Luchadora 1.0.2 (2017-04-20 09:31:15)

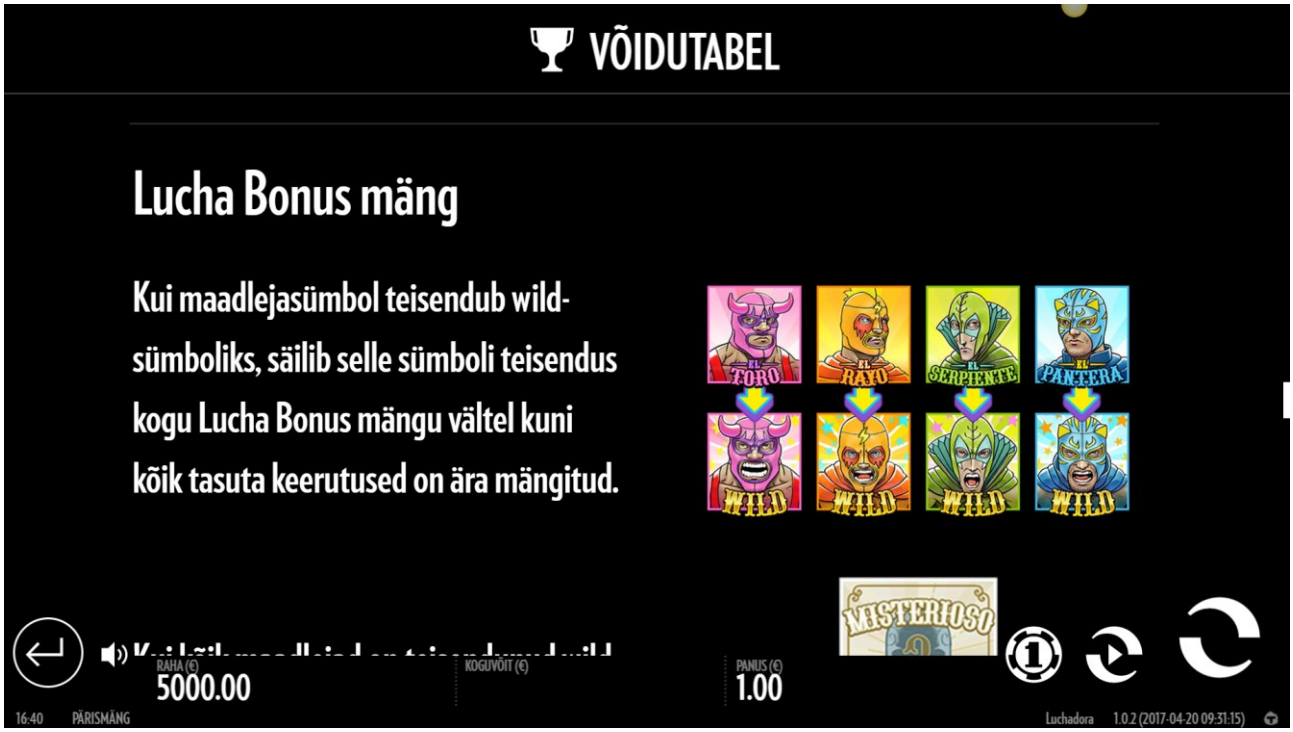

VÕIDUTABEL
Panuse kordajaga võidu
2x BET
3x BET
5x BET
15x BET
Lucha Bonus mängus annab Lucha Smackdowni sümbol ühe järgmistest:
Tasuta keerutused
2 FREE SPINS
3 FREE SPINS
5 FREE SPINS
7 FREE SPINS
RAHA (€)
5000.00
KOGUVÕIT (€)
PANUS (€)
1.00
16:39
PÄRISMÄNG
Luchadora 1.0.2 (2017-04-20 09:31:15)

VÕIDUTABEL
Panuse kordajaga võidu
2x BET
3x BET
5x BET
15x BET
Maadleja teisendumine
EL TORO
EL RAYO
EL SERPIENTE
EL PANTERA
WILD
WILD
WILD
WILD
RAHA (€)
5000.00
KOGUVÕIT (€)
PANUS (€)
1.00
16:39
PÄRISMÄNG
Luchadora 1.0.2 (2017-04-20 09:31:15)

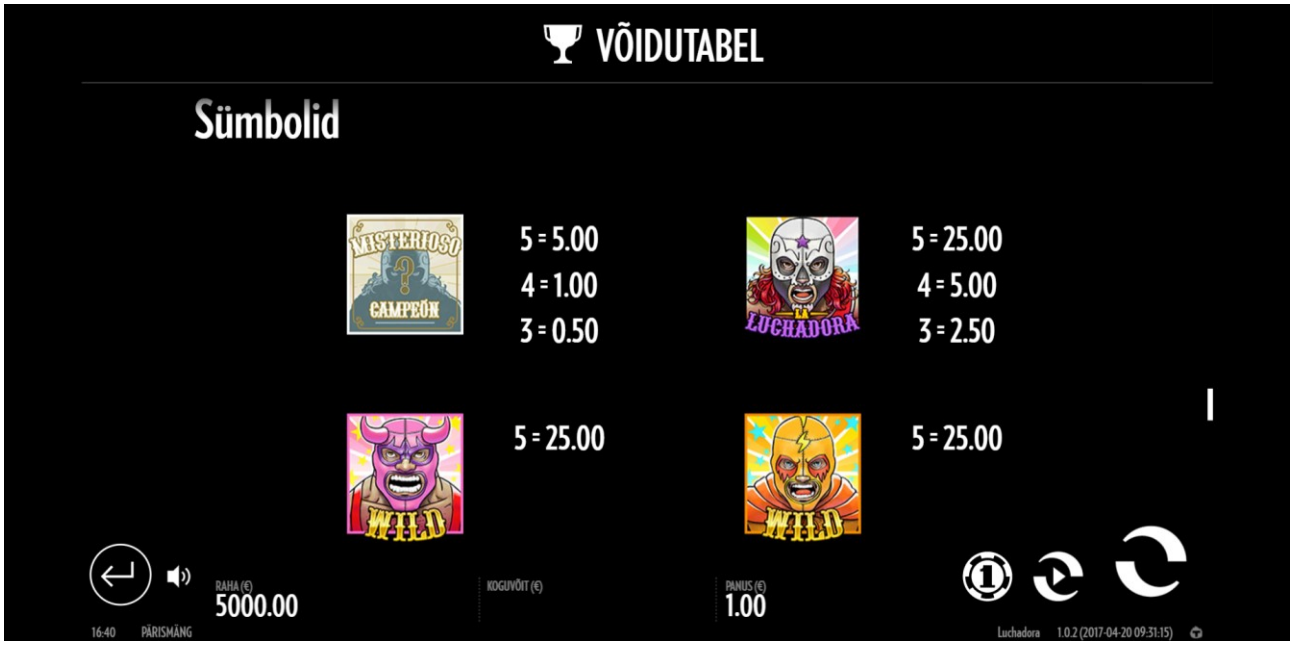

VÕIDUTABEL
Maadleja teisendumine
EL TORO
EL RAYO
EL SERPIENTE
EL PANTERA
WILD
WILD
WILD
WILD
Lucha Bonus sümbol
RAHA (€)
5000.00
KOGUVÕIT (€)
PANUS (€)
1.00
16:39
PÄRISMÄNG
Luchadora 1.0.2 (2017-04-20 09:31:15)

VÕIDUTABEL
Lucha Bonus sümbol
3 või enam Lucha Bonus sümbolit
käivitavad tasuta keerutustega
Lucha Bonus mängu.
3 = 7 tasuta keerutused
4 = 11 tasuta keerutused
LUCHA BONUS
RAHA (€)
5000.00
KOGUVÕIT (€)
PANUS (€)
1.00
16:39
PÄRISMÄNG
Luchadora 1.0.2 (2017-04-20 09:31:15)

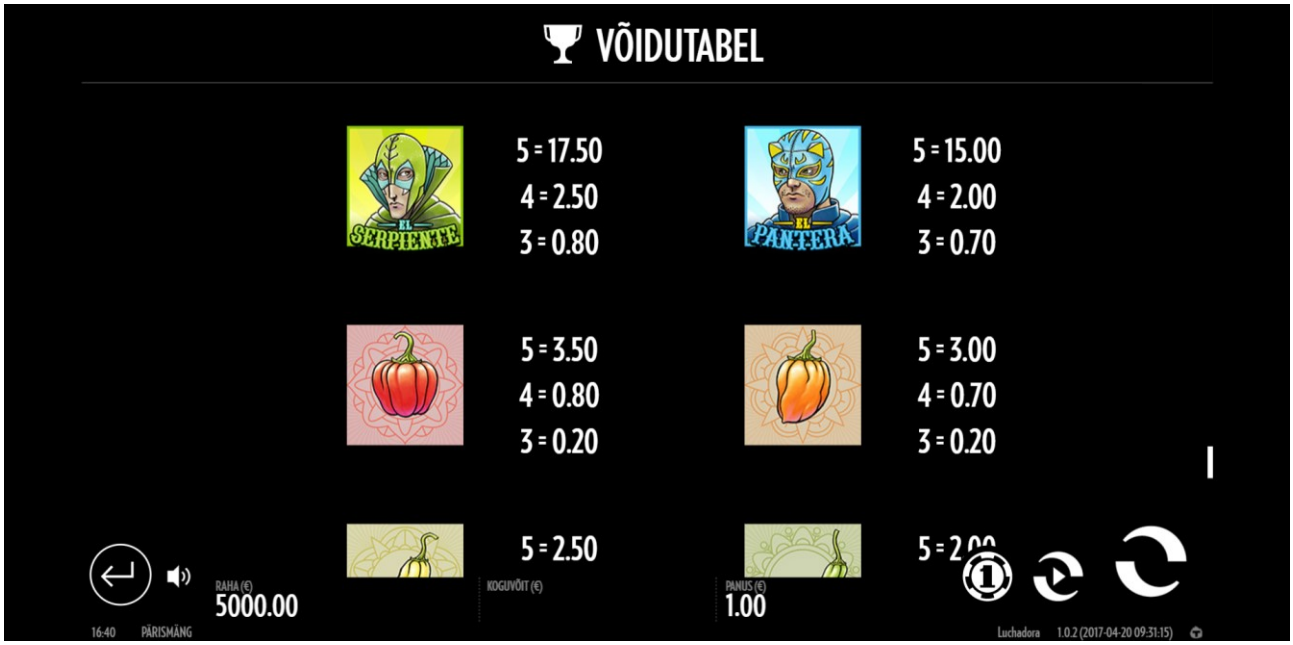

VÕIDUTABEL
3 = 7 tasuta keerutused
4 = 11 tasuta keerutused
5 = 15 tasuta keerutused
LUCHA BONUS
Lucha Bonus mäng
Kui maadlejasümbol teisendub wild-sümboliks, säilib selle sümboli teisendus
RAHA (€)
5000.00
KOGUVÕIT (€)
PANUS (€)
1.00
16:39
PÄRISMÄNG
Luchadora 1.0.2 (2017-04-20 09:31:15)

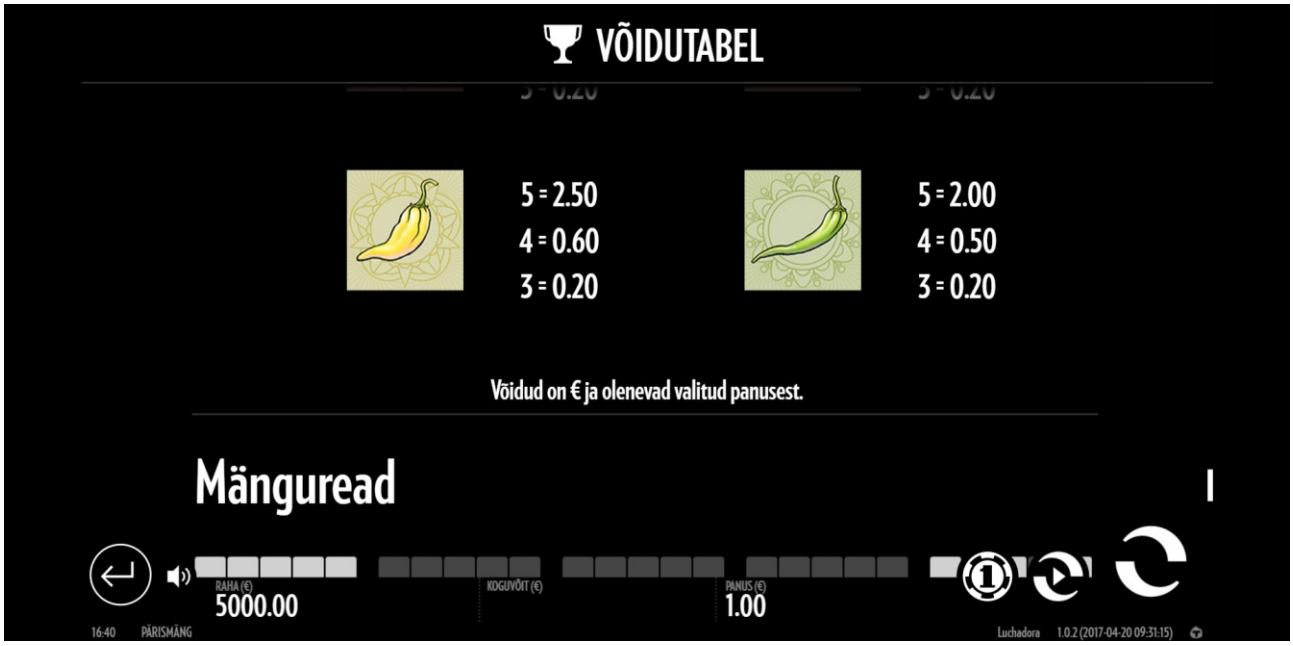

VÕIDUTABEL
Lucha Bonus mäng
Kui maadlejasümbol teisendub wild-sümboliks, säilib selle sümboli teisendus kogu Lucha Bonus mängu vältel kuni kõik tasuta keerutused on ära mängitud.
EL TORO
EL RAYO
EL SERPIENTE
EL PANTERA
WILD
WILD
WILD
WILD
MISTERIOSO
RAHA (€)
5000.00
KOGUVÕIT (€)
PANUS (€)
1.00
16:40
PÄRISMÄNG
Luchadora 1.0.2 (2017-04-20 09:31:15)

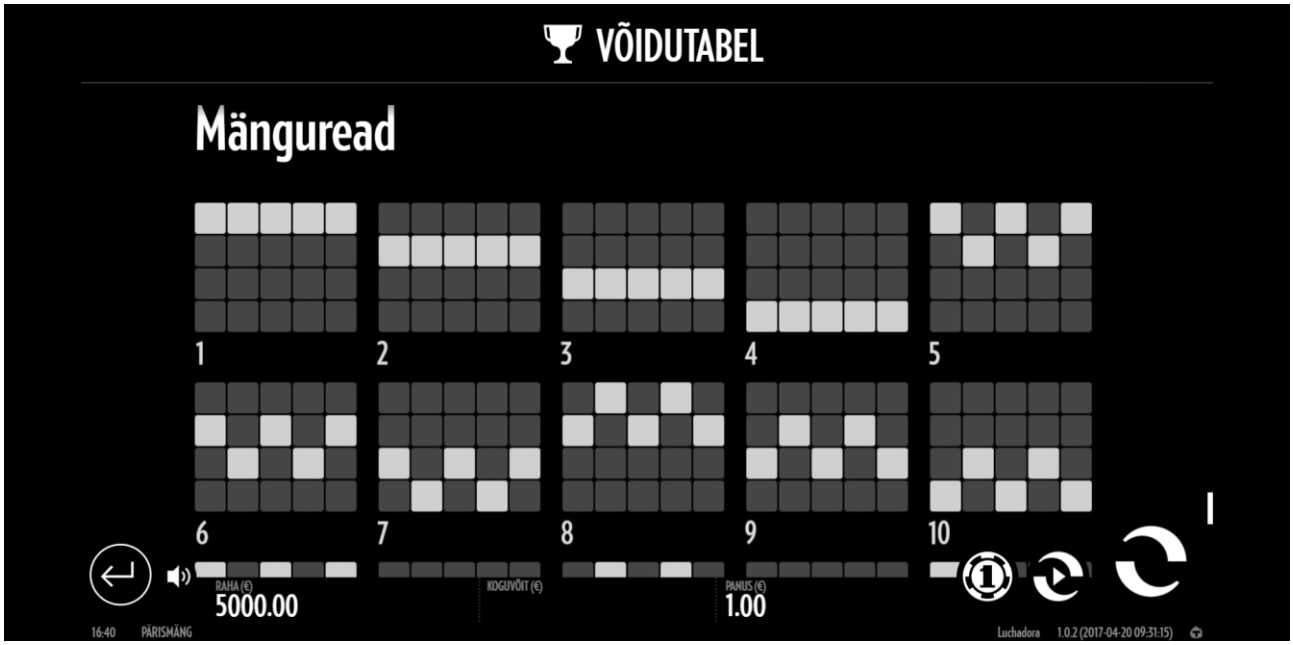
VÕIDUTABEL
Kui kõik maadlejad on teisendunud wild-sümboliteks, asendatakse Allajääjasümbol La Luchadora sümboliga.
MISTERIOSO
CAMPEÓN
LA LUCHADORA
Sümbolid
RAHA (€)
5000.00
KOGUVÕIT (€)
PANUS (€)
1.00
16:40
PÄRISMÄNG
Luchadora 1.0.2 (2017-04-20 09:31:15)

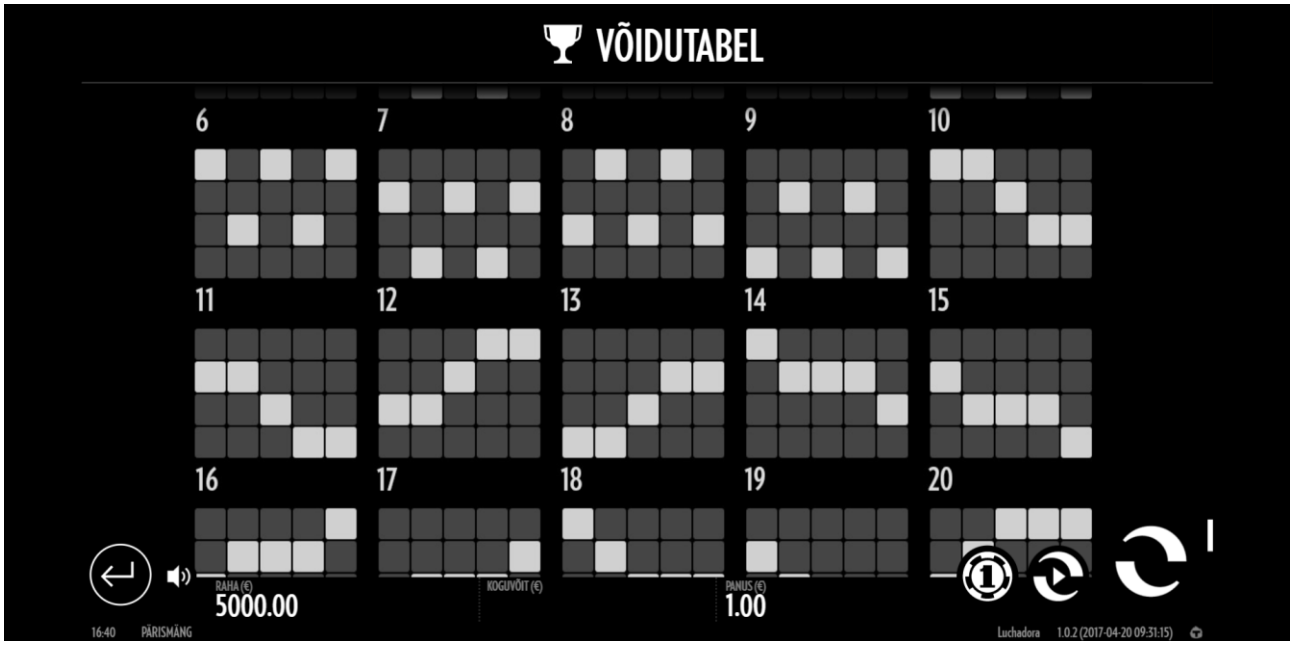

VÕIDUTABEL
Sümbolid
MISTERIOSO
CAMPEÓN
5 = 5.00
4 = 1.00
3 = 0.50
LA LUCHADORA
5 = 25.00
4 = 5.00
3 = 2.50
WILD
5 = 25.00
WILD
5 = 25.00
RAHA (€)
5000.00
KOGUVÕIT (€)
PANUS (€)
1.00
16:40
PÄRISMÄNG
Luchadora 1.0.2 (2017-04-20 09:31:15)

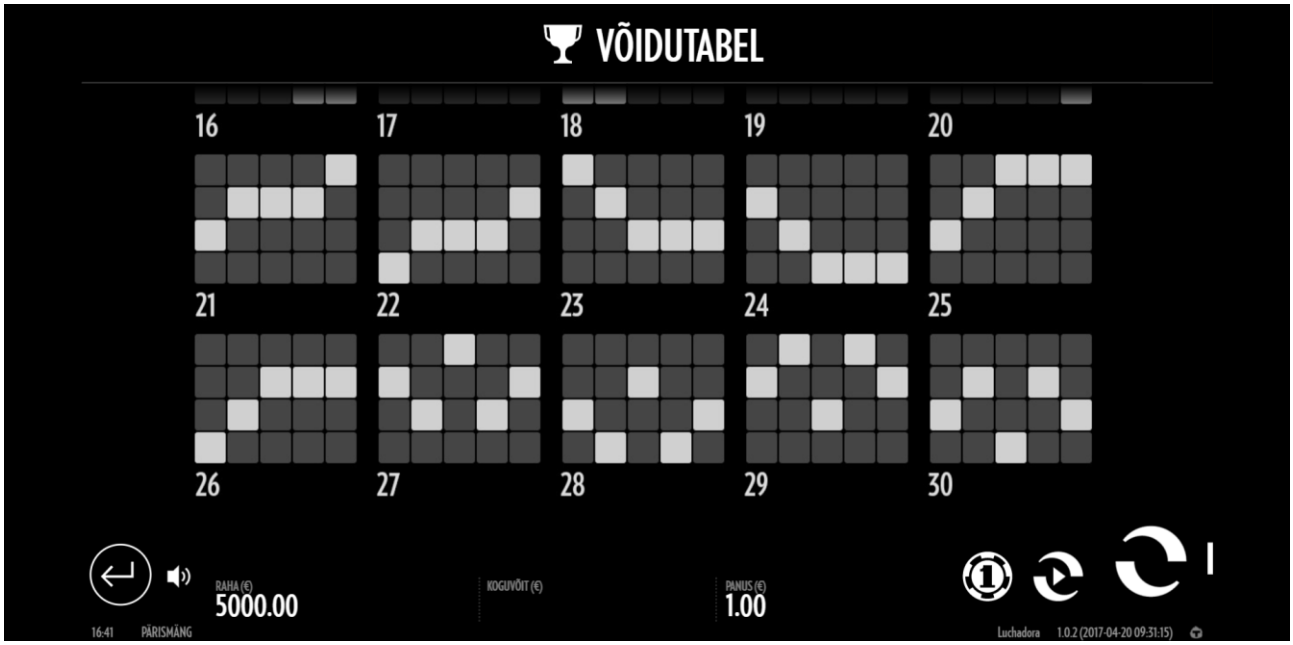
VÕIDUTABEL
5 = 25.00
5 = 25.00
5 = 25.00
4 = 4.00
3 = 1.20
5 = 20.00
4 = 3.00
3 = 1.00
5 = 17.50
RAHA (€)
5000.00
KOGUVÕIT (€)
PANUS (€)
1.00
16:40
PÄRISMÄNG
Luchadora 1.0.2 (2017-04-20 09:31:15)


VÕIDUTABEL
5 = 17.50
4 = 2.50
3 = 0.80
5 = 15.00
4 = 2.00
3 = 0.70
5 = 3.50
4 = 0.80
3 = 0.20
5 = 3.00
4 = 0.70
3 = 0.20
5 = 2.50
RAHA (€)
5000.00
KOGUVÕIT (€)
PANUS (€)
1.00
16:40
PÄRISMÄNG
Luchadora 1.0.2 (2017-04-20 09:31:15)


VÕIDUTABEL
5 = 2.50
4 = 0.60
3 = 0.20
5 = 2.00
4 = 0.50
3 = 0.20
Võidud on € ja olenevad valitud panusest.
Mänguread
RAHA (€)
5000.00
KOGUVÕIT (€)
PANUS (€)
1.00
16:40
PÄRISMÄNG
Luchadora 1.0.2 (2017-04-20 09:31:15)


VÕIDUTABEL
Mänguread
1
2
3
4
5
6
7
8
9
10
RAHA (€)
5000.00
KOGUVÕIT (€)
PANUS (€)
1.00
16:40
PÄRISMÄNG
Luchadora 1.0.2 (2017-04-20 09:31:15)


VÕIDUTABEL
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
RAHA (€)
5000.00
KOGUVÕIT (€)
PANUS (€)
1.00
16:40
PÄRISMÄNG
Luchadora
1.0.2 (2017-04-20 09:31:15)


VÕIDUTABEL
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
RAHA (€)
5000.00
KOGUVÕIT (€)
PANUS (€)
1.00
16:41
PÄRISMÄNG
Luchadora
1.0.2 (2017-04-20 09:31:15)

GAME: Luchadora – Mobile

Mängureeglid (2017-04-05)

Nupp		Funktsioon
		Klikkige, et mängukorda alustada. Arvutil võite vajutada ka klaviatuuri tühikuklahvi.
		Kuva panustamise valikud.
		Kuva automaatmängu valikud.
		Kuva mängureeglid.
		Kuva maksetabel.
		Keri tutvustus edasi.
		Lülitab heli sisse ja välja.
		Välju mängust.
		Välju sellelt ekraanilt.
FREE SPINS 10		Stardiboonus (nt tasuta spinnid).
		Peata automaatmäng.

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Märkus: **Luchadora** videomänguautomaati nimetatakse ka nimedega Luchadora või Mäng.

1. Luchadora on 5 rulliku ja 30 fikseeritud mängureaga videomänguautomaat. Mängus on maadleja wildid, hajussümbolid, allajääjad, Lucha Smackdown ja tasuta keerutustega Lucha Bonus mäng. Mängija teoreetiline tasuvus on 96,2%.

2. Mänguvooru alustatakse tegevusnupuga, misjärel mängitakse mäng valitud panusetasemega.

3. Mänguvooru ajal panuseid muuta ei saa.

4. Automaatmängu puhul mängitakse automaatmängu lehel valitud arv mänguvoore automaatselt.

5. Lucha Bonus sümbol on hajussümbol, mis võib ilmuda suvalisele rullikule. 3 või rohkem Lucha Bonus sümbolit käivitavad Lucha Bonus mängu koos võidutabelis toodud arvu tasuta keerutustega.

6. Maadlejasümbolid: Mängus on 4 maadlejasümbolit; El Toro, El Rayo, El Serpiente ja El Pantera.

7. Nurgapositsioonid: 4 nurgapositsiooni on alguses hõivamata ja muutuvad hõivatuks, kui maadlejasümbol neil peatub. Nurgapositsioonid on 1. ja 5. rulliku ülemised ja alumised positsioonid.

8. Ringinurga funktsioon: Kui maadlejasümbol seiskub hõivamata nurgaasendis, asendatakse maadlejasümbol vastava wild-sümboliga. Lucha Bonus mängus säilib selline teisendus kogu mänguvooru ajaks.

9. Allajääja/La Luchadora sümbol Kui kõik maadlejasümbolid on Lucha Bonus mängus Ringinurga funktsiooniga teisendunud, asendatakse Allajääjasümbol kogu järelejäänud Lucha Bonus mängu ajaks La Luchadora sümboliga.

10. Lucha Smackdowni sümbol on sümbol, mis võib ilmuda 5. rullikule.

11. Põhimängus annab Lucha Smackdowni sümbol ühe järgmistest võitudest: (1) panuse kordajaga võidu, või (2) tagatud arvu tasuta keerutustega Lucha Bonus mängu käivitumise.

12. Lucha Bonus mängus annab Lucha Smackdowni sümbol ühe järgmistest: (1) panuse kordajaga võidu, (2) täiendava arvu tasuta keerutusi või (3) suvalise hõivamata nurga hõivamise ja Ringinurga funktsiooni käivitamise.

13. Kõik mängu väljamaksed ja võidukombinatsioonid makstakse välja vastavalt võidutabelile.

14. Kõik mänguvooru mänguridade võidud liidetakse kokku ja see summa kuvatakse mänguvooru lõpus.

15. Kõik võidud kuvatakse ja makstakse välja valitud valuutas.

16. Asendussümbol asendab kõiki teisi sümboleid siis ja ainult siis, kui asendussümbol on kombineeritud vähemalt veel ühe sümboliga, mida ta võitvalt mängurealt asendab.

17. Mängu rikke korral loetaks kõik sellega seotud panused ja võidud kehtetuks.

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