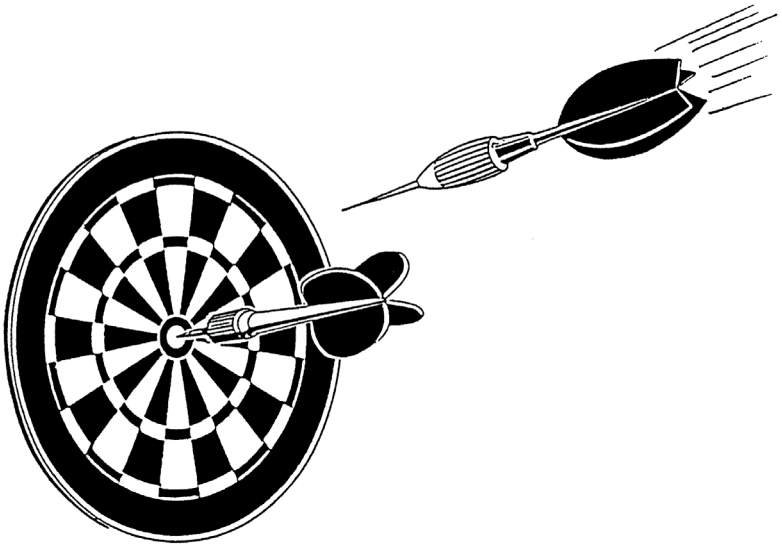
User manual for

the

sports equipment

LÖWEN Sport Dart HB10



LÖWEN ENTERTAINMENT
NOVOMATIC GROUP

All of the technical information in this manual was compiled/composed by the manufacturer with the utmost care and using effective control measures. The manufacturer reserves the right to make changes to this manual.

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This user manual is available for download at www.loewen.de/dart.

The instructions provided here must be followed.
This document was created in accordance with the European Standard EN 62079:2001. It is valid for

Dart 10 (HB10 V21)

until a later version is published. The version number of the document is indicated by the identification number below this paragraph.
The machine can be identified by the ID badge on its rear.

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1. Explanation of symbols and safety notes

	**DANGER:** **Danger due to electric shock with possible serious injury or death as a result**
	**WARNING:** **Warning about possible injury or damage to property**
	**CAUTION:** **Information about possible mistake**
	**NOTICE:** **Provides additional information and explanations**.

These instructions are intended for use only by qualified and trained personnel.
The owner of the machine must ensure that only qualified and trained personnel work on it.
To avoid damage to the machine and injuries to persons, only perform the work described in this manual.

This machine does not contain any components that can be repaired by a non-specialist. Always contact a trained specialist if repairs are required.
When these instructions are followed and the machine is handled as intended, this machine meets current safety standards.

The manufacturer expressly warns users to refrain from non-intended use and deliberate misuse of the machine. Do not bypass the safety devices on the machine. The manufacturer does not assume any guarantee or warranty for improper use.

Because the machine must be opened in order to be emptied, make the personnel responsible for this task aware of the following safety notes.
Read and observe the information in the manual to ensure your safety and to avoid damage to the machine.



DANGER:

In the situations described below, there is a risk of electric shock, which might cause serious injury or even death.

- **In the case of danger, disconnect the machine from the power supply!**
  The machine is de-energized only once the mains plug has been disconnected.
  Never plug the mains plug in or pull it out with damp or wet hands.
- **Risk of electric shock!**
  Risk of fire/electric shock if unusual noises, smoke or smells are present.
  Immediately disconnect the machine from the power supply and contact a specialist to perform repair work.
- **Never force the machine open! Risk of electric shock or fire!**
  There are freely accessible live parts inside the machine.
- **Never clean the machine with a jet of water!**
- **Do not leave any foreign objects in the machine! Risk of short circuit, electric shock or fire!**
  In particular, do not insert any objects into the inside of the machine through the vent slots, since such objects might come into contact with live parts.
- **Do not pour liquid into the machine! Risk of electric shock or fire!**
  If liquids have been poured into the machine, disconnect the machine from the power supply and arrange for it to be checked by a specialist.



WARNING:

In the situations described below, there is a risk of injury or death.

- **Only darts with plastic tips are allowed to be used with this machine.**
- **Observe the safety distance!**
  To avoid people being injured by a stray or ricocheting dart, do not place the machine directly next to entrances (doors). To avoid people being injured by a thrown or ricocheting dart, make sure that nobody is standing in the throwing area during play.
- **Risk of machine falling over!**
  For safety reasons, the machine must be secured to the ground or wall so that it cannot fall over.
- **Protect cables! Risk of short circuit or fire!**
  People might trip on cables that run across the floor.
  In particular, protect mains cables and plug connections from mechanical stress such as being crushed or pulled.
- **Danger from heat! Risk of burns!**
  Some components reach high operating temperatures.
- **Risk of crushing injuries!**
  When the machine doors are closed, there is a risk that people‘s fingers might get trapped.



WARNING:

In the situations described below, there is a risk of damage to property.

- **Do not use organic solvents (e.g., diluents) or scouring agents to clean the machine!**
- **Ensure ventilation! Risk of overheating!**
  Slots and other openings on the top, side and bottom of the casing are for ventilation purposes. To ensure that the machine works properly and does not overheat, these openings may not be blocked or covered. To ensure adequate ventilation, ensure that the machine is at least 10 cm away from walls and other structures.
- **Pay attention to ambient conditions!**
  Ambient temperature: 10°C to 35°C!
  Ambient humidity may not exceed 30-80% (non-condensing) in any circumstances.
  Risk of damage, short circuit or fire! The machine is not suitable for erection outside.
  Never expose the machine to wet conditions or to temperatures above 50°C.
  If the machine has been exposed to an extremely low temperature for a relatively long period of time, wait for a while for it to adjust to room temperature before placing it into operation.
  The machine may never be used in the vicinity of powerful heat sources such as electric fires.
  Do not set the machine up in places subject to rapid temperature fluctuations or excessive dust.
- **Independent alterations/changes to the machine are prohibited for safety reasons and invalidate the warranty.**
  Only use original parts or parts approved by the manufacturer when replacing defective parts. Parts and accessories that are not supplied by the manufacturer cannot be checked or approved. The manufacturer rejects any liability for damage caused by using non-original parts and accessories.

- **Disposal of batteries**
  The batteries in the machine may not be opened, recharged or burned. As a general rule, batteries that are no longer required must be taken to a designated collection point so that the recyclable material they contain can be reused. Disposal via the normal household waste is not permitted. By following these rules, you make a positive contribution to protecting the environment.

- **Returning the machine**
  To ensure that the requirements of the German Electrical and Electronic Machine Act (ElektroG) and Directive 2012/19/EU (WEEE) are met, the machine must be returned to the manufacturer once it is no longer in use. This also applies to replacement parts and spares.

2. Technical data

Dimensions

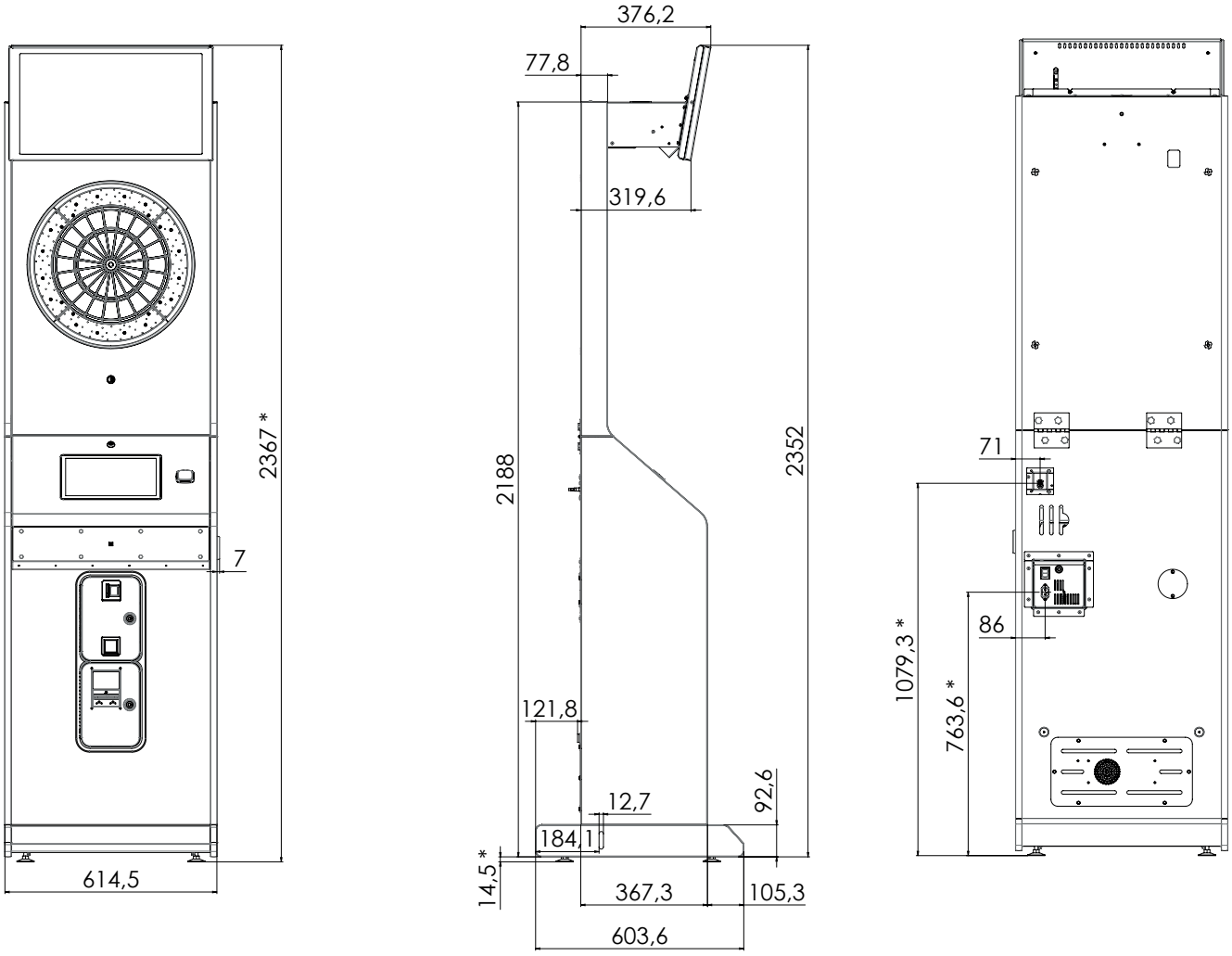
Height	2360 mm
Width	620 mm
Depth	600 mm
Weight	Approx. 105 kg

Connected loads

Mains voltage	85V - 264 V / 47 - 63 Hz
Power consumption	75 W

Operating conditions

Temperature	In operation: 10°-35°C, in storage: 0°-40°C
Rel. humidity	30%-80% (non-condensing)



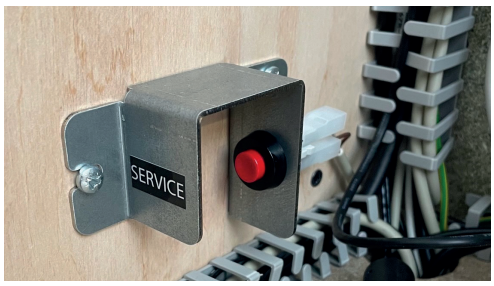
Alle Angaben in mm

NOTICE:

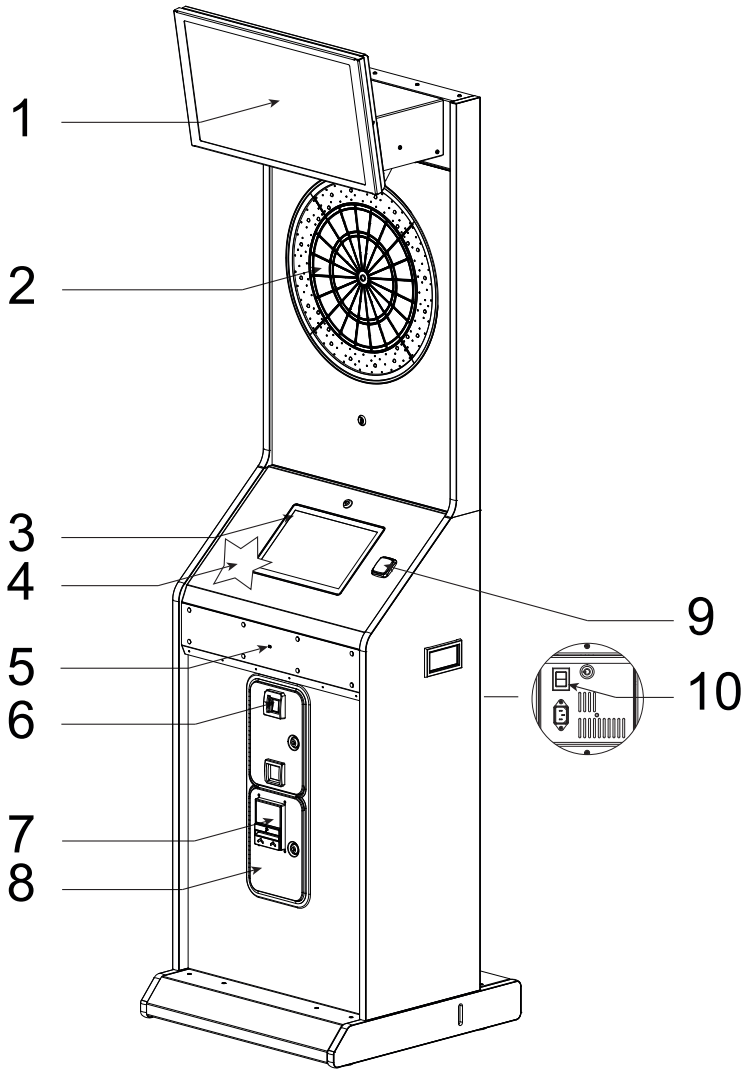
Dimensions marked with * may change due to the screwable feet in the base of the HB10.

3. Functional elements

1 Top display monitor
2 Target
3 Bottom monitor with touchscreen
4 Service button (inside)
5 Player detection sensor
6 Coin slot
7 Bank note
8 VDAI interface (inside)
9 Player change button
10 On/off switch



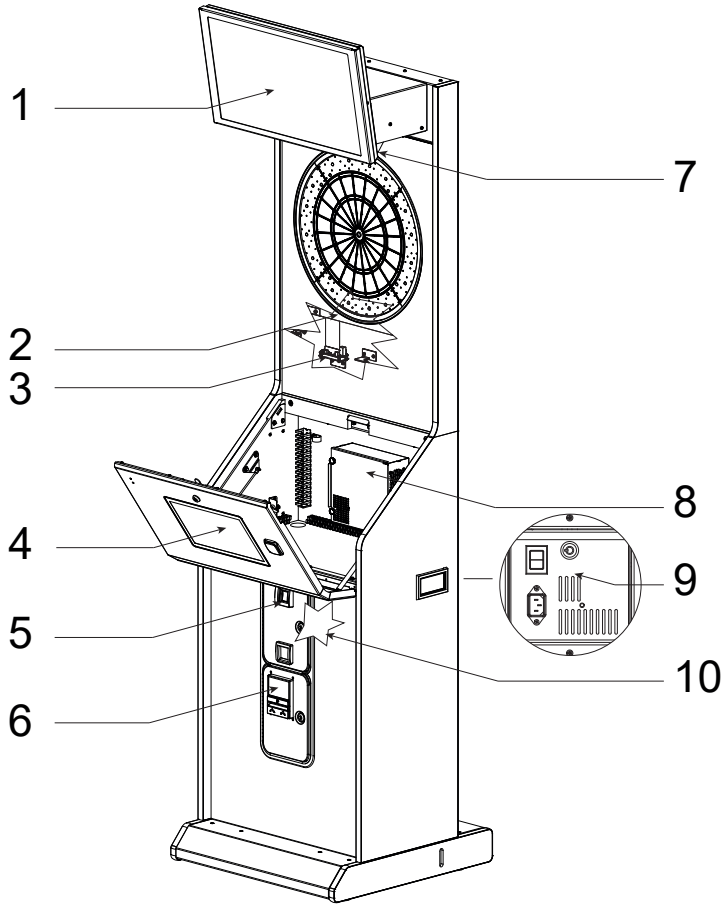




4. Komponenten

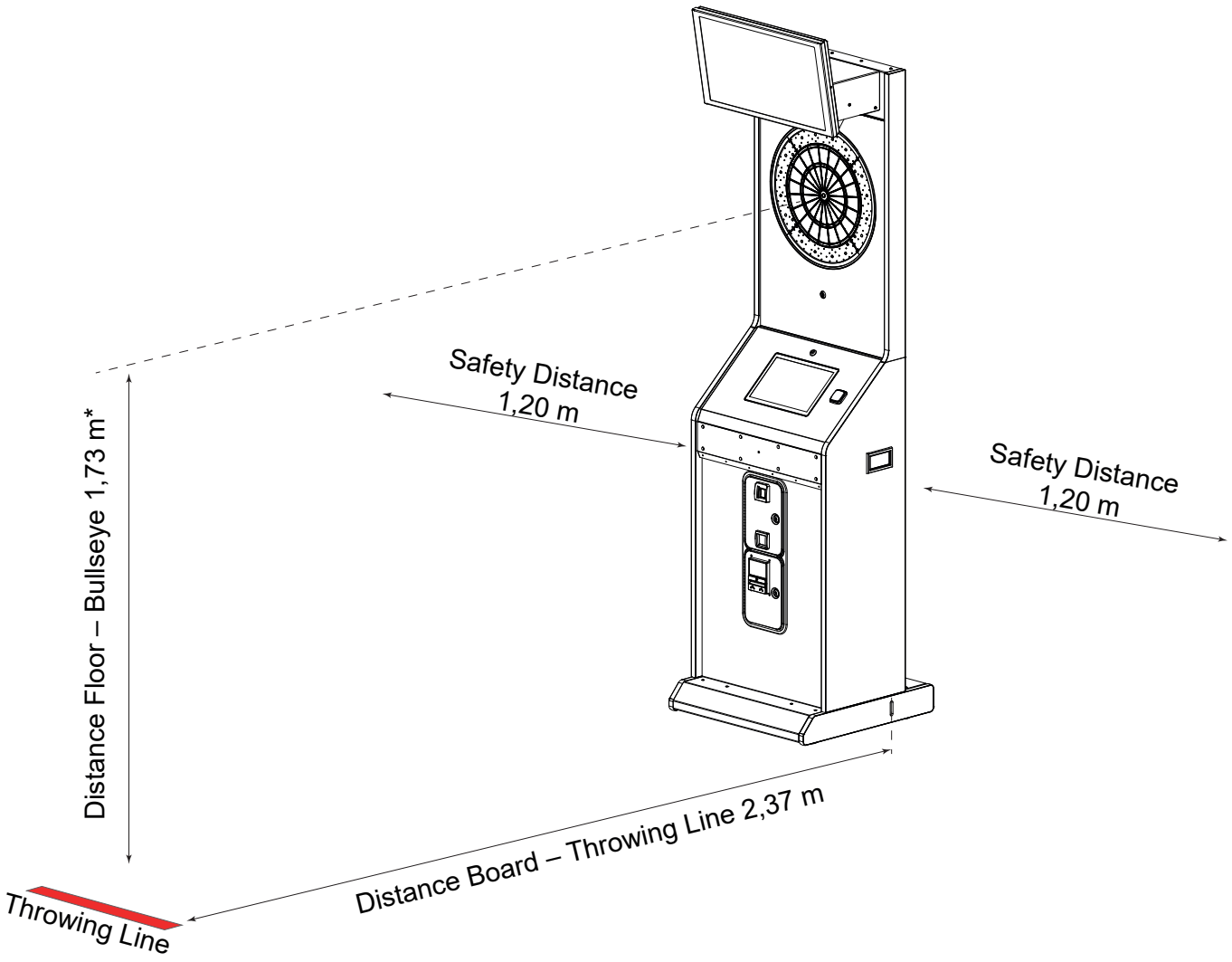
WARNING:
The machine has LED lighting.
Never look directly into the LEDs at a close distance or for a relatively long period of time. The optical radiation emitted can damage the cornea and retina.

1 Top display monitor (23.8“)
2 Target matrix
3 PCB for switch matrix and
4 miss detection
5 Bottom monitor with touchscreen (12.1“) 5 Coin checker door/coin checking device
6 Bank note door/bank note checking device
7 LED lighting
8 Control unit
9 Power supply
10 Dart-IO-device, interface for bank note checking device, power distributor



4.1. Recommended setup area

Width	min. 3,00 m
Depth	min. 3,00 m
Ceiling height	min. 2,50 m



NOTICE:

***Due to the screwable feet in the base of the HB10, the height of the Bullseye of 1.73 m must be adjusted to the local conditions.**

5. Erection and initial startup

WARNING:
The machine can tip over. There is a risk of injury or death. There is a risk of crushing when the machine doors are opened and closed. Fingers can be trapped!

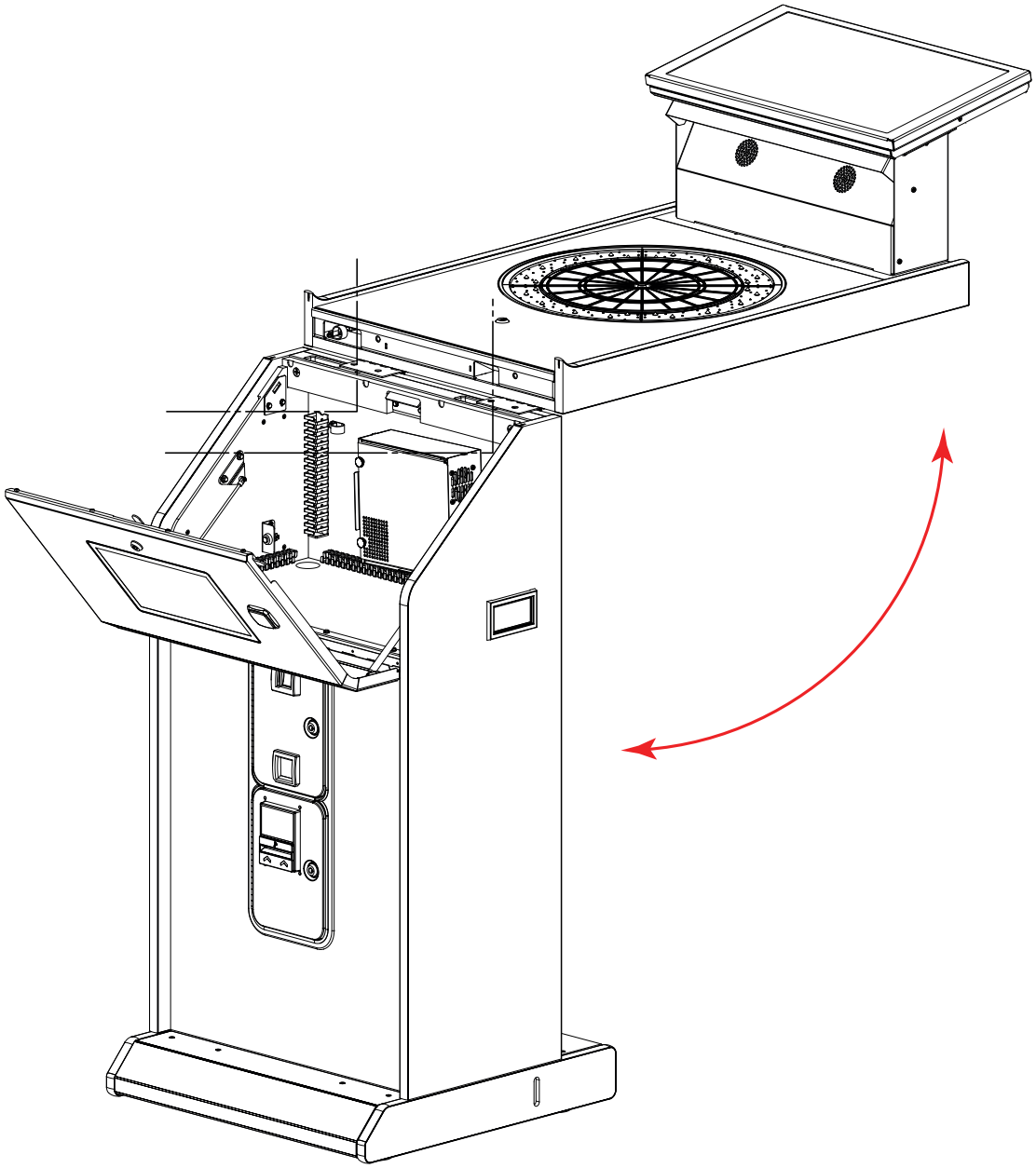
5.1. Machine erection

A minimum of two people are required to erect the machine.
A size 13 open-end wrench or equivalent is required to erect the machine

Once the packaging has been removed, the machine must be put together as follows:

1. Open the cover of the electronics compartment.

2. Remove the hex bolts from the cash box and lay them out ready with the open-end wrench in the electronics compartment.





CAUTION:
Pay attention to the cable routing of the top and bottom part. The cables can get jammed in and damaged.

3. Carefully and slowly fold up the top part. Make sure that the bottom part is stable when doing so. Note that the top part must be held in place until it is firmly screwed to the bottom part.

4. From the electronics compartment, screw the top and bottom parts of the machine together with the provided hex bolts. Make sure that the top and bottom parts are firmly screwed together. This prevents the risk of injuries.

5. Connect up the mains cable:
   The mains cable is rolled up in the cash box. Feed the free end of the mains cable through the opening and pull enough of the cable through the opening to reach the power socket.

6. Now place the machine in its intended position next to the socket. At no time may the machine be tilted by more than 10 degrees! Plug the machine mains cable into the power socket.



CAUTION:
Do not close the vent slots on the machine!

5.2. Attachment of machine to wall

WARNING:
The machine can tip over. There is a risk of injury or death. The machine must be secured to the floor and/or wall to stop it from falling over. The required fixation material is included with the machine.

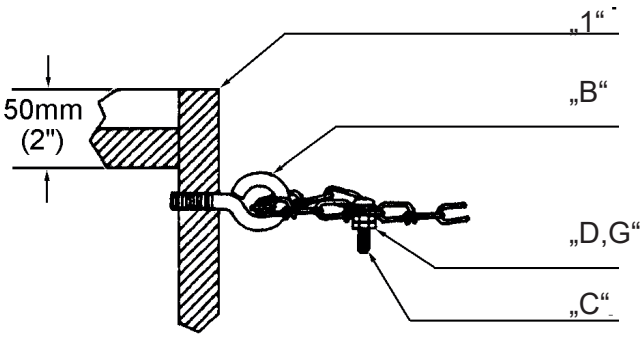
Included fixation material:

A 			A: 30 cm knotted chain
B 	C 	D 	B: 40x M8 EYE BOLT C: 16x M4 FILLISTER HEAD SCREW D: D 4.3 WASHER
E 	F 	G 	E: 10x 61 ALL-PURPOSE DOWELS F: EYE BOLT with wood thread G: M4 STOP NUT

Required tools: Tape measure or ruler, size 1 Phillips screwdriver, engineer's pliers, drill (depending on the wall material)

Fixation of eye bolt and chain to top part of machine

1. Screw the eye bolt „B“ centrally into the rear wall „1“ of the top part of the machine.
2. Attach the chain with the screw „C“, washer „D“ and nut „G“ to the eye bolt „B“.
3. Place the machine in the play position and mark a point on the wall in a direct line with the eye bolt and chain on the rear of the machine.



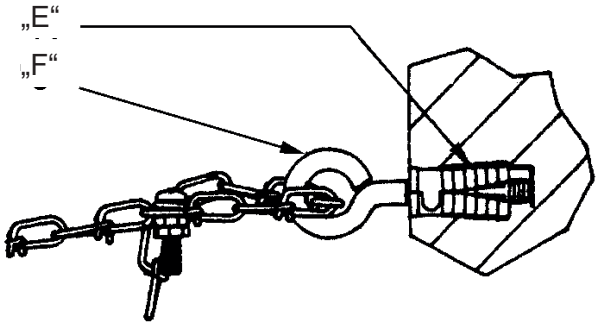
Attachment to a solid wall
(concrete, brick, pumice etc.)

1. At the marked point, drill a hole for the dowel „E“.

2. Place the dowel „E“ into the drilled hole and screw the eye bolt „F“ into it.

3. Guide the chain through the eye bolt

4. „F“ and screw the chain with the screw „C“, washer „D“ and nut „G“ as displayed. When mounted, the chain should have only a little sag.

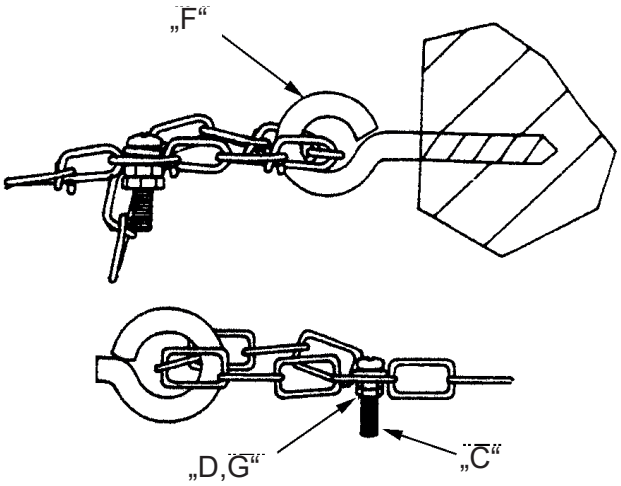


Attachment to wooden walls

1. Screw the eye bolt „F“ to the marked point on the wall. (Drill a hole if necessary.)

2. Guide the chain through the eye bolt

3. „F“ and screw the chain with the screw „C“, washer „D“ and nut „G“ as displayed. When mounted, the chain should have only a little sag.



5.3. Initial start up



WARNING:

Only darts with plastic tips are allowed to be used with this machine.

Switch the darts machine on with the mains switch on the rear of the machine.

5.4. Sensors

The darts machine has two special sensor systems.

5.4.1. Piezo-sensor

In the dart detection zone, a detected hit is signaled by a short tone. Once three thrown darts have been detected, the machine prompts the user to remove the darts.
The piezo sensor is activated at the factory.

5.4.2. Distance sensor

The machine has a distance sensor. This allows it to determine whether a player is standing directly in front of the dartboard (e.g., in order to remove darts). Once the piezo sensor detects three darts (on the board), the infrared sensor is activated. The [CHANGE PLAYER] button does not need to be pressed because the infrared sensor detects a player removing darts from the board.
The calibration of the distance sensor is neither necessary nor possible.



NOTICE:

Both sensors need to be checked at the setup site.



NOTICE:

Players dressed in black can sometimes confuse the automatic player change detection system. In such cases, the [CHANGE PLAYER] button must be pressed.

The [CHANGE PLAYER] button must also be pressed if:

- darts are thrown past the machine;
- the target door is hit;
- a dart misses the board score area;
- the piezo sensor or infrared sensor is switched off.

5.4.3. Calibrating the dart sensor (piezo sensor)

NOTICE:

The sensor is set correctly at the factory. These adjustment instructions are required only if repair work is necessary.

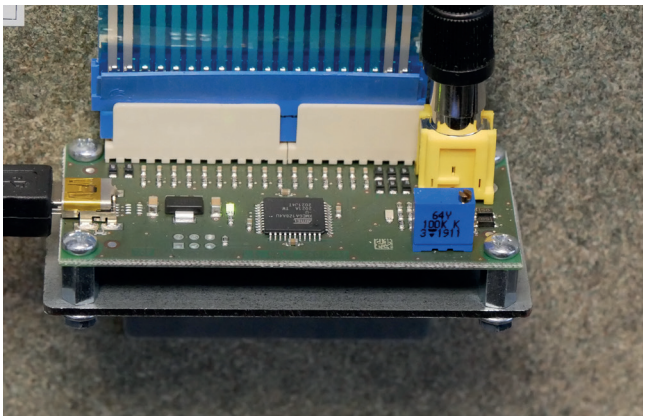
NOTICE:

Do not set the sensor to be excessively sensitive!

If the sensor is set to be excessively sensitive, loud music can result in the incorrect counting of darts. If the dart sensor is calibrated correctly, it works perfectly up to noise levels of 110 dB.

The dart sensor adjuster (potentiometer) is located under the dartboard behind the target surround. It can be adjusted with a size 1 slot screwdriver. You can use the LED next to the potentiometer to check the sensitivity.

Turning the knob clockwise increases the sensitivity.



5.5. Token programming

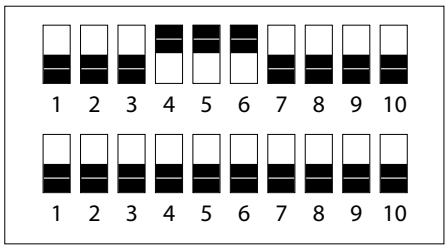
For other coin types or tokens, the NRI G13 mft USBa coin validator can be programmed directly in „teach mode“ without additional software. This means that a coin type or token is reassigned to a coin channel. Coin channels 7 and 8 of the activated memory block are available for teaching by default. (S1.7, S1.8)

1. Turn on the device.

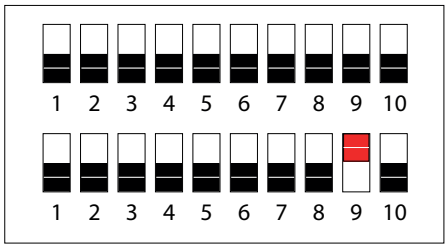


2. Open the coin acceptor door.

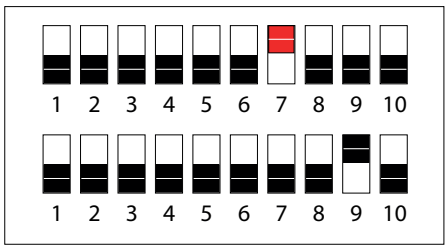
3. Set all DIL switches 1–10 of the lower switch block (S2) to OFF.
   The upper switch block (S1) is an example and may vary.
   Note the switch position of the upper switch block (S1) and set all to OFF.



4. Set DIL switch 9 of the lower switch block S2.9 to ON. The device is in teach mode for programming the coin channels.

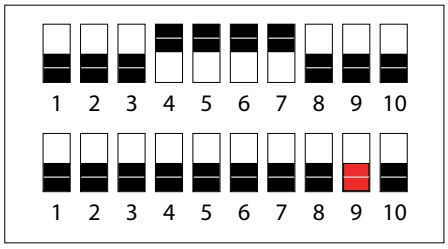


5. Set the DIL switch of the coin channel S1.7 or S1.8 to ON.
   Example:
   In the example, S1.7 is set to ON.



6. Insert at least 10 coins of the new coin type/token into the coin acceptor or dart device. The coins will be sorted into the return chute during the learning phase.After inserting the 10th coin, the acceptance switch will click once (an audible sound).For better acceptance, we recommend teaching the coin acceptor with 20 coins.

7. Set DIL switch S2.9 on the lower switch block back to OFF. The acceptance switch will click once (an audible click) when the save is successful.
8. Set the upper switch block back to the original configuration and set the learned channel, e.g., S1.7, to ON.



9. Perform a RAMCLEAR.

10. Check the crediting („Crediting“ on Page 37).

11. Close the coin acceptor door and check the coin acceptance.Replace Components

5.6. Replace Components

Some components must be re-registered after replacement (coin acceptor, banknote acceptor). This requires performing a RAMCLEAR („5.7. RAMCLEAR“ on Page 21).



NOTICE:

Check whether a newer program version is available for your device before you start working.

5.7. RAMCLEAR

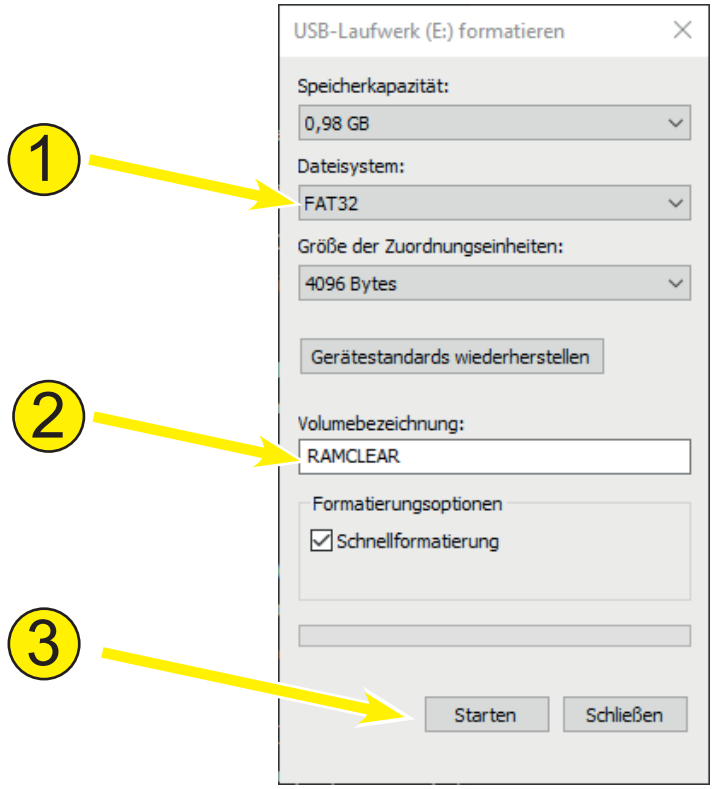
CAUTION:
Performing a RAMCLEAR resets the device. All settings are deleted except the serial number.

NOTICE:

Check whether a newer program version is available for your device before you start working.

To do this, proceed as follows:

- Format an empty USB stick with the label “RAMCLEAR”.



- If necessary, save the settings (see „8.2.2. Device | Basic settings | Manage“ on Page 39).
- Insert the USB stick into a free USB port on the device.
- Turn on the device. The components are displayed on the screen.
- After the message „Restart Machine with RAMCLEAR Switch off“ appears, turn off the device, remove the USB stick, and turn it back on.
- If necessary, reload the settings („8.2.2. Device | Basic settings | Manage“ on Page 39).

5.8. Care and maintenance

The following servicing instructions are intended for use only by qualified and trained personnel.



WARNING:

When covers are opened and parts are removed, live parts are exposed.

The machine is de-energized only once the mains plug has been disconnected. The machine must be de-energized by disconnecting the mains plug before all exchange/maintenance work.

All work must be performed by electrically trained specialists who are familiar with the associated risks and the applicable regulations.

To ensure the safe use of the machine, the safety instructions in the machine manual and the technical regulations and directives as per DIN/VDE must be observed for all work.

5.8.1. Cleaning the dartboard

Switch the machine off and open the cover panel of the top casing. Unlock the installation unit by turning the two rotary levers at the top corners. Now carefully fold down the spider with the segments to remove any dirt and broken off tips.

5.8.2. Cleaning the screens

If the dartboard is really dirty, it can be cleaned with a commercial cleaning agent.

5.8.3. Cleaning the casing

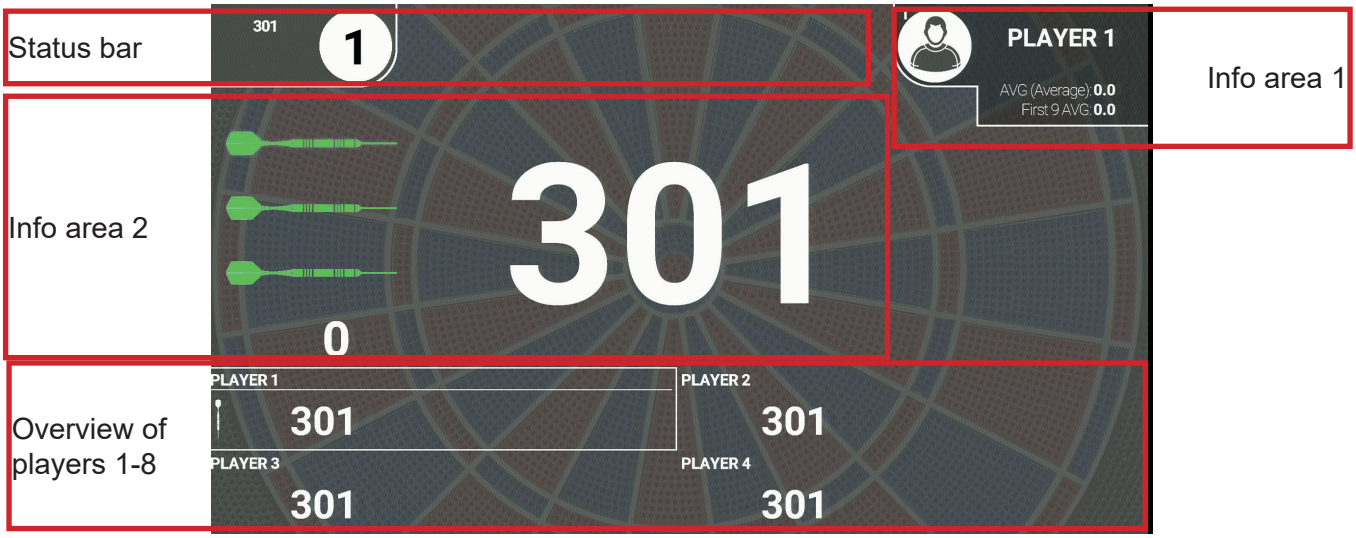
Carefully wipe dust off the casing with a soft cloth. If the casing is really dirty, wipe a soft damp cloth with a mild cleaning solution (e.g., dish detergent) over it.
Do not use scouring pads, alkaline/acidic cleaning agents, scouring powders or volatile solvents such as alcohol, gasoline, diluents or insecticide. To ensure sufficient ventilation, we recommend that you regularly vacuum out the vent slots.

6. Screens

6.1. Top screen

The info screen has the following sections.

Status bar	The status bar shows the current game and round. If a number of rounds has been defined for the game, this is also displayed (Round: 2/25).
Info area 1	Info area 1 shows the current player and their average strike rate per game. If the game could be ended with a single dart, this is indicated in the middle.
Info area 2	Info area 2 shows the current number of dart throws and the current points for the player.
Game overview	The game overview shows all of the players with their current points. The current player is outlined.



6.2. Bottom screen

The bottom screen is a touchscreen that allows the machine to be controlled.



7. Game instructions

7.1. General game instructions

Select modes

Select a mode. The following options are available:

Games	Normal mode: All available games and options are available.
League mode	In league mode, only league-relevant games are displayed.
Tournament	In tournament mode, only tournament games are available. 3-8 players can participate.
Training	Training is playable with one or with 2 players. Single, Double, Triple or Bull as well as given check outs can be trained. In Training Mode, players can find out their hit rate within a maximum of 20 rounds..



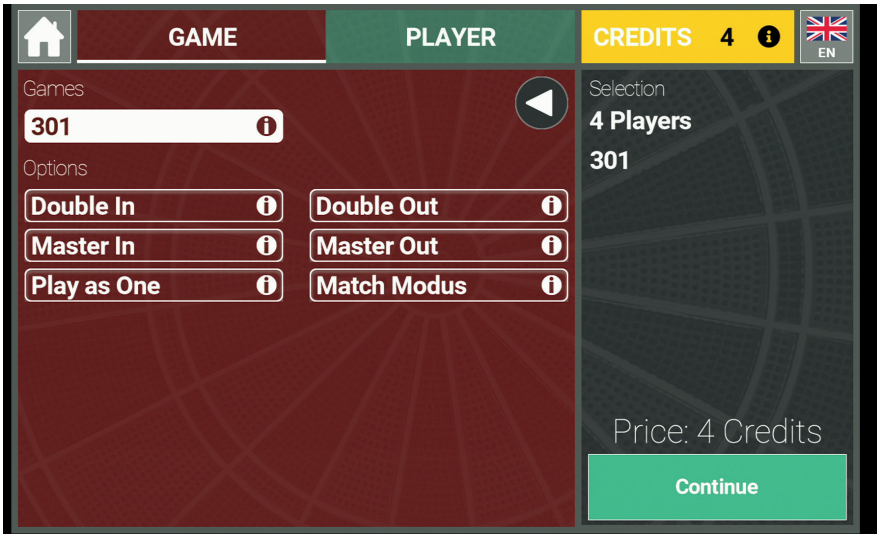
Selecting a game

Choose your game.

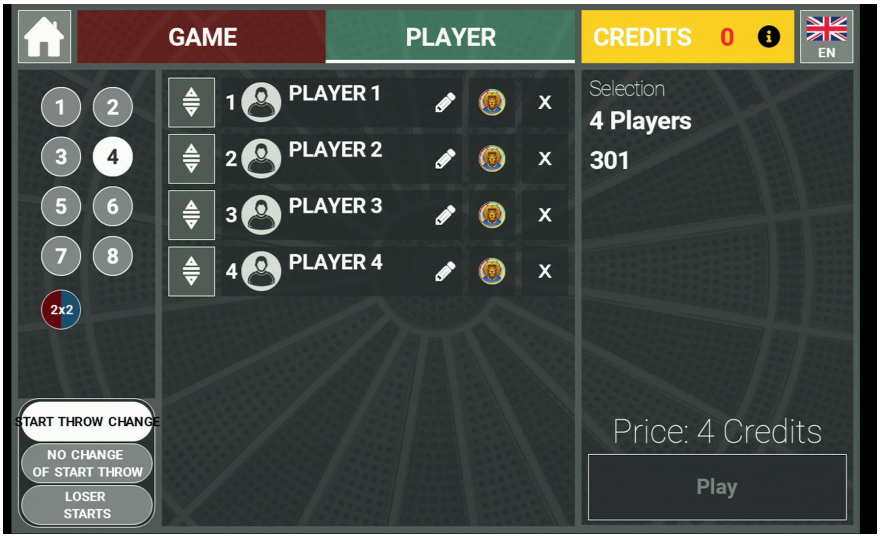


Setting options

If desired, select the options for the game. If insufficient credits are available, the credits are highlighted in red. In this case, remove the options or insert money to increase the number of credits. Press [Continue].

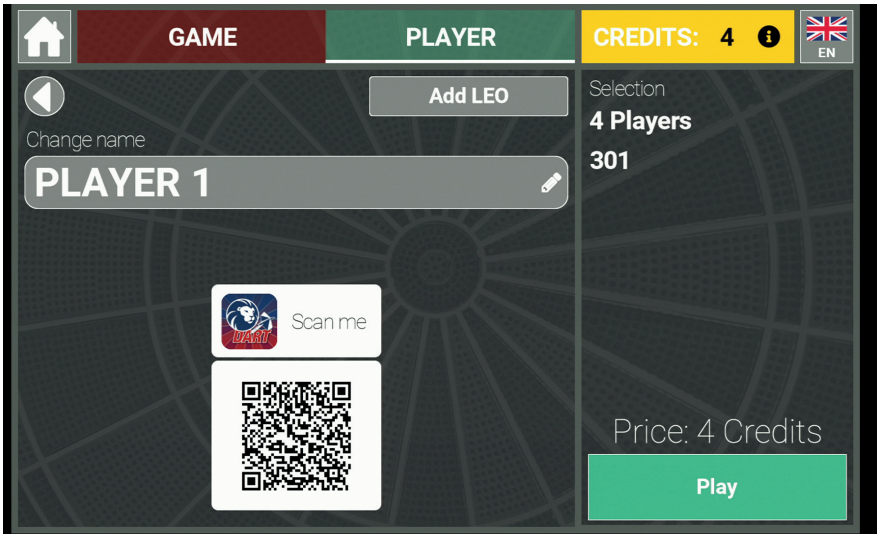


Select the number of players or tap the team symbol and then enter the number of teams. Tap [PLAYER1] etc. to enter individual names or to activate LEO.



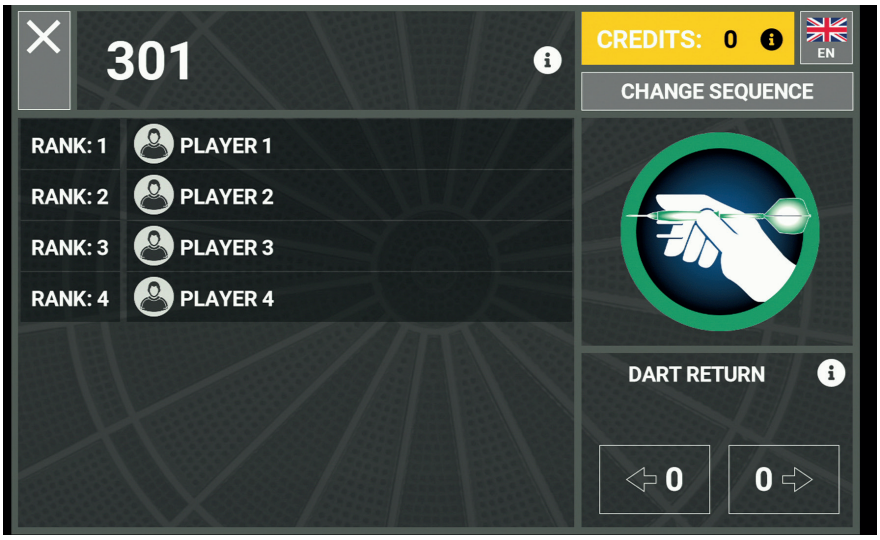
Tap [PLAYER 1] to enter individual names via displayed keyboard. Alternatively, players can load their own profile via QR code or via LÖWEN DART App.

NOTICE:
In order to use the options offered by the LÖWEN DART App, the machine must be operated with network (compare „8.2.10. Device | Network“ on Page 45).

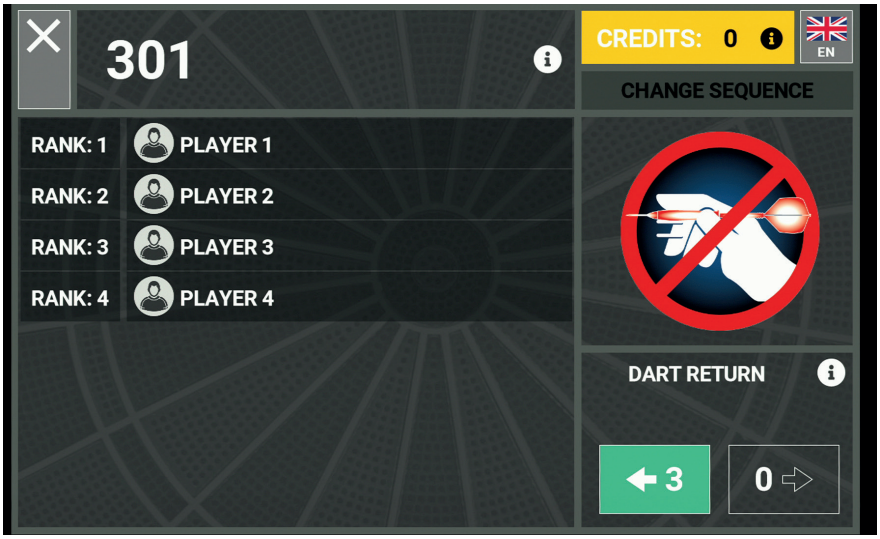


Starting a game

The player can start throwing their darts once the green throw symbol appears. Any darts thrown before this are not counted.



Once the player has thrown three darts, they can remove the darts from the dartboard. The red „DO NOT THROW“ symbol blocks the machine until the player moves away from the board. The machine automatically switches to the next player. Alternatively, you can press the [CHANGE PLAYER] button. This enables the machine regardless of whether someone is standing right in front of the board.



NOTICE:
If three darts (hits) are not registered, you must press the red [**CHANGE PLAYER**] button before removing the darts from the dartboard.

7.2. Game instructions for individual games

7.2.1. *01 games

Each player starts with 301, 501 or 701 points. The winner is the first person to reach exactly 0 points.

Bust
If a player scores a number of points that causes them to go below 0 in a round, they lose any darts not yet thrown in that round. Their round ends there. Their score is reset to the number of points they had at the start of the round.

7.2.2. Cricket

The aim of the game is to close out certain numbers/segments by hitting them three times and thus prevent players from scoring points on the closed-out segments.
This game uses segments #15, #16, #17, #18, #19, #20 and the bullseye. The player who closes out a number first can continue to score points every time they hit that number until all players have closed it out. The display shows the numbers of the closed-out segments grayed out and replaced by „--“. Once the bullseye is also closed out, the monitor is grayed out, too. The game is won by the player who has closed out all numbers and the bullseye and who has scored the most points. If two players have the same score, the player who closed out all of the numbers and the bullseye first wins.

Example: To close out #20, you must score a single #20 three times, a single and a double #20 once each, or a triple #20 once.

7.2.3. 301 Elimination

This game is similar to the other 01 games, but each player has the chance to reset the score of the other players to 0. Each player starts the game with 0 points. The winner is the first player to score exactly 301 points or the player with the highest score after 10 or 20 rounds. To eliminate another player, you simply have to achieve exactly the same score as another player with any throw of the dart.

Example: Player 1 has 80 points, player 2 has 120 points, player 3 has 90 points and player 4 has 150 points. With their first dart in a round, player 1 hits a 10, taking them to 90 points. This eliminates player 3. With their second dart, player 1 scores a double 15, taking them to 120 points, which eliminates player 2, too. With their third dart, they hit double 15 again to reach 150 points, and player 4 is also eliminated. All players other than player 1 have 0 points.

7.2.4. Shanghai

Each player has 3 darts per round. The aim of the game is to hit each segment in order, starting from #1 and finishing on #20, and finally to hit the bullseye. The winner is the player with the highest score after seven rounds or the first player to score a Shanghai. In each round, the machine indicates to the player which segment they have to hit next. A player wins by scoring a „Shanghai“ if they score on a single, double and triple of consecutive numbers in the same round. The order doesn‘t matter.

Example: A player scores on segment 4, 5 and 6 in the 4th round: First a single 4, then a double 5, then a triple 6. This is a Shanghai

7.2.5. Split Score (Classic)

Each player starts with 40 points. In each round, each player throws three darts at segments designated by the machine. In the case of a hit, the result is added to the player‘s score (including any doubles and triples). If the player fails to achieve at least one hit on the designated segment in a round, their score is halved. The designated segments are 15, 16, any double, 17, 18, any triple, 19, 20 and bull. The winner is the player with the highest score after 9 rounds.

7.2.6. Rapid Fire (Classic)

The aim of this game is to hit designated segments within a prescribed time limit. You must finish the round within 15 ticks (three ticks equal one second). The three segments to be hit are displayed at the start of the round. Each player starts by throwing their first dart at the first designated segment. The timeout counter starts with the first hit. The 2nd and 3rd darts must then be thrown before the timeout counter runs out. Points can only be scored by hitting the displayed segments. Each segment on the target is designated once during the game. The winner is the player with the highest score after seven rounds. If two players have the same score, the player with the most remaining time wins.

7.2.7. High Score

Each player has three darts per round. The winner is the player with the highest score after 7 rounds.

7.2.8. Super Handicap

In Super Handicap, players with different skill levels can play against each other. Each player’s starting score can be chosen individually from the 01 games. All 01 options can be chosen as well.

7.2.9. Ballon Party

The aim of this game is to hit the segments displayed on balloons. Per hit, the player randomly receives 2 thru 5 points. If double or triple segments of a balloon are hit, or all 3 darts hit one balloon, a new balloon appears. If outer or inner bull is hit, 2 or 3 new balloons appear. Once no balloons are left the whole screen will be refilled with balloons but only until round 7 is reached. The game ends when no balloons are left and no balloons are refilled. The player with the highest score wins

7.3. Game options

7.3.1. *01 game options

Double In	The game starts with a hit in a segment in the double ring or in the bullseye. All hits that take place before this „Double In“ hit do not count.
Double Out	The game must be ended with a hit in a segment in the double ring or in the bullseye and a score of exactly 0. A score of 1 is a bust.
Double In/Out	This is a combination of „Double In“ and „Double Out“.
Master In	Like „Double In“, but the game can also be started with ahit in a segment in the triple ring.
Master Out	Like „Double Out“, but the game can also be ended with ahit in a segment in the triple ring.
Master In/Master Out	This is a combination of „Master In“ and „Master Out“.
Play as One	Variant for Team. If a team chooses this option, they commonly play the given score down. Thus there is a common team score and no score for the single player.

7.3.2. Cricket options

Chance It	Played like normal Cricket but the machine designates six random numbers and the bullseye. Otherwise, the usual rules for Cricket apply.
You Pick It	Played like normal cricket, but a player designates any six numbers/segments and the bullseye. To designate the segments, wait for the 0 to start flashing. Then press 6 segments of your choice on the dartboard. The selected numbers appear on the display monitor in descending order. Otherwise, the usual rules for Cricket apply.
Cut Throat	Played like normal Cricket except that players who have closed out numbers/ segments then add points to their opponents’ scores if they hit these segments again. The winner is the player who has closed out all of the numbers and has the lowest score.
Master Cricket	Played like normal cricket except that players score points only by closing out a number. Once a player has closed out all of their numbers and the bullseye, they can score points in all of the numbers that are still open for their opponents until their opponents have closed out all of the numbers and the bullseye. The winner is the player who has closed out all of the numbers and has the highest score.

7.3.3. Cricket-Variationen

Chance It / Cut Throat	This game is a combination of Chance It and Cut Throat Cricket.
Chance It / Master Cricket	This game is a combination of Chance It and Masters Cricket.
You Pick It / Cut Throat	This game is a combination of You Pick It and Cut Throat Cricket.
You Pick It / Master Cricktet	This game is a combination of You Pick It and Masters Cricket.

7.3.4. Split Score options

Classic	The designated segments have the order 15, 16, any double, 17, 18, any triple, 19, 20, bull.
Shuffle	Segments 15, 16, any double, 17, 18, any triple, 19, 20, and bull are selected in a random order.
Chance It	Played like normal Split Score except that the machine designates nine random numbers/segments and the bullseye.
You Pick It	Played like normal Split Score except that a player designates any nine numbers/segments. To designate the segments, press the nine segments of your choice on the dartboard.

7.3.5. Split Score options

Classic / Chance It	This game is a combination of Classic and Chance It.
Classic/You Pick It	This game is a combination of Classic and You Pick It.
Shuffle/Chance It	This game is a combination of Shuffle and Chance It.
Shuffle/You Pick It	This game is a combination of Shuffle and You Pick It

7.3.6. Shanghai options

Classic	This option is played according to the rules as described in „7.2.4. Shanghai“ on Page 28 within 7 rounds.
Long	This option is played according to the rules as described in „7.2.4. Shanghai“ on Page 28 except that only one number/ segment is displayed per round. Number of rounds is 20.

7.3.7. Rapid Fire options

Classic	The three segments to be hit are displayed at the start of the round. There are seven rounds.
Modern	Only one segment is designated per round. There are ten rounds.

7.3.8. Team options for 301 / 501 / 701 and 301 Elimination

301, 501 and 701 can be played with „blocked“ players. „Blocked“ players cannot end the game. If a blocked player does reach 0 by throwing a dart, depending on the programming (see „8.2.20. Games | Basic settings“ on Page 57), this is considered as a bust or as a team loss.
Handicap games are possible other than for 301 Elimination.
Example: Team A Team B
Player 1 = 80 points Player 2 = 20 points
Player 3 = 5 points Player 4 = 30 points Player 3 cannot end the game Team can end the game

Teams with two players
This option can be selected only if there is sufficient credit for the 301, 501 and 701 game variants. Players 1 and 3 make up Team A and players 2 and 4 make up Team B.
To create the teams, tap the „Team“ symbol (see „„7.1. General game instructions“ on Page 24

7.3.9. Team-Option bei Cricket
Here, the conditions for blocked players mentioned above apply in accordance with the programming (BUST/LOSE). Handicap games are possible.
In the case of Cricket and Cut Throat Cricket, a team can only score points on a number if both players in the team have closed out the segment in question. Points can be scored until both players on the other team have also closed out the segment.
The game is over once both players in a team have closed out all of the numbers and the bullseye and have achieved the score associated with the game.
Example: Team B has closed out #18; of the players in Team A, only player 1 has closed out #18. This means that Team B can score points until player 3 has also closed out #18.

Teams zu je 2 Spielern (2, 3 oder 4 Teams)
This option can be selected only if there is sufficient credit for a game with four, six or eight players. Team A is made up of players 1 and 3, Team B is made up of players 2 and 4, Team C is made up of players 5 and 7 and Team D is made up of players 6 and 8.
To create the teams, tap the „Team“ symbol (see „7.1. General game instructions“ on Page 24).

7.3.10. LEO (Play against the computer)

LEO is a virtual player controlled by the computer. Their skill level can be adjusted from rookie (1) thru pro (15).

7.4. 301-Elimination Team-Rules

The players in a team cannot clear each other‘s points. Players in a team can clear the points of players from the other team as described in the rules for Elimination.



NOTICE:
If both players in a team have the same score, an opposing player can set them both to 0 by achieving the same score.

The team of the player who reaches 301 first (before 10 or 20 rounds have been played) wins as long as the team score is higher than that of the other team. If a team player reaches a score of 301 but their team does not have a higher score than the other team, this results in a bust (the score of the player who has reached 301 is reset to the score at the start of the round) or in the loss of the game. Which of these occurs is dependent on the programming; see „8.2.20. Games | Basic settings“ on Page 57.
The game has 10 or 20 rounds. Once the set number of rounds has been reached, the team with the higher team score wins.

7.5. Training mode

Aim of this training game is to hit as many chosen segments as possible. All segments (for example, single segments) are available. The player choses the segments they want to practice.

60 darts (20 rounds) are available. The number of hits is displayed on the left side while the total number is counted down on the right side

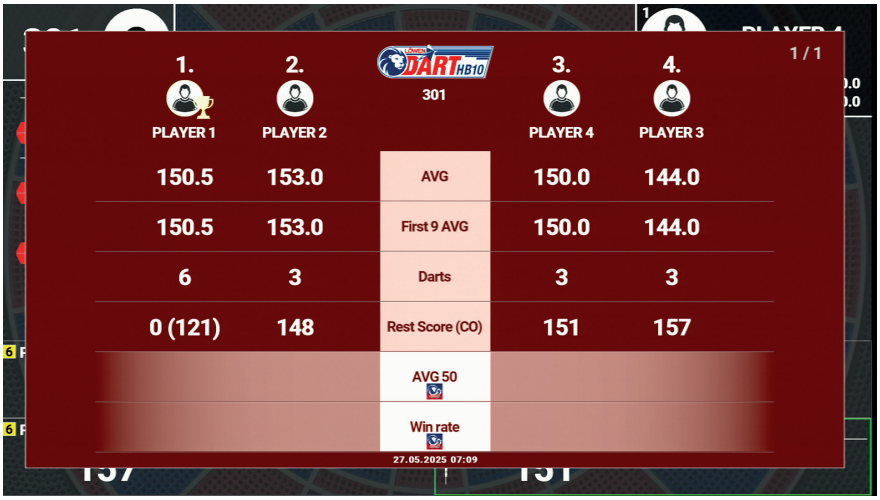
Targeting: Single	all single segments
Targeting: Double	all double segments
Zielwerfen: Triple	all Triple-segments
Targeting: Bull **Double Bull**	bull and double bull
Checkout Practice	The randomly chosen remaining score must be played down with the displayed segments.

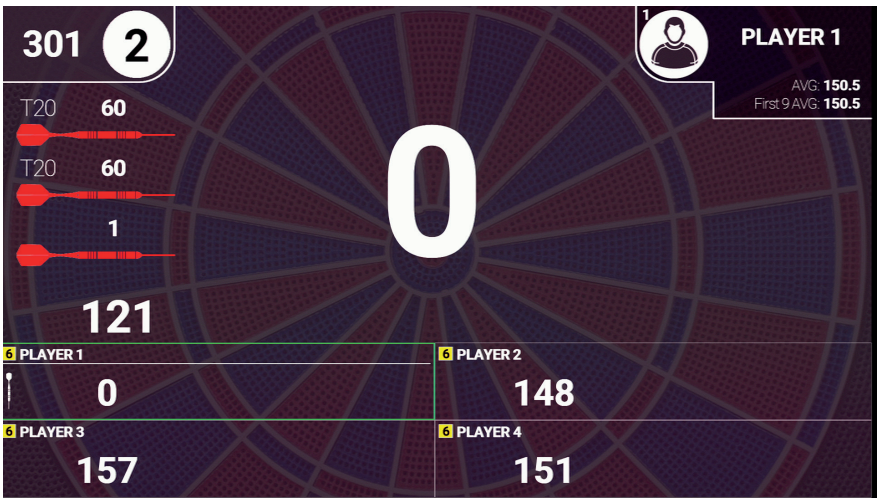
7.6. Performance statistics

The performance statistics are displayed after the end of the game. If there are multiple players, each player is displayed automatically for two seconds. The overall performance statistics are displayed for ten minutes. During this time, the same game can be started again using the „Players“ button. If insufficient credit is available, the machine switches to animation mode once the performance statistics time is up.

7.7. 301 / 501 / 701 - performance statistics

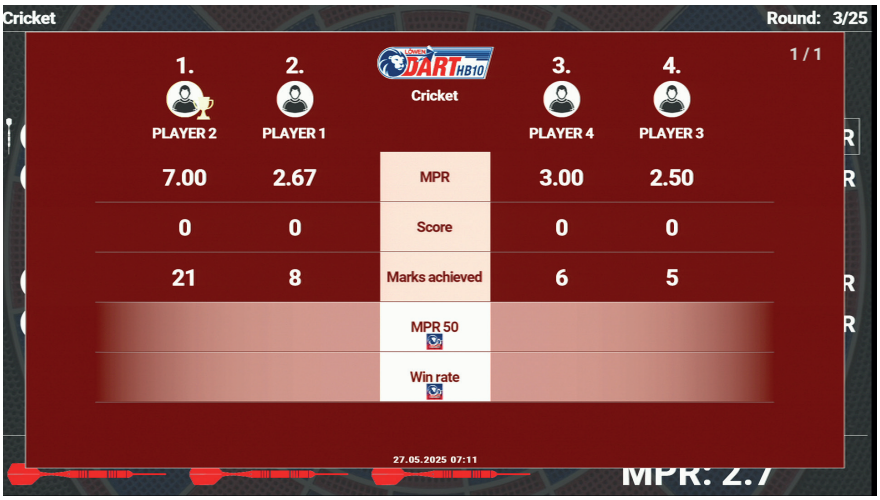
PPD (Point per Dart) Shows the average number of points per throw.
AVG (Average) Shows the average score per game.

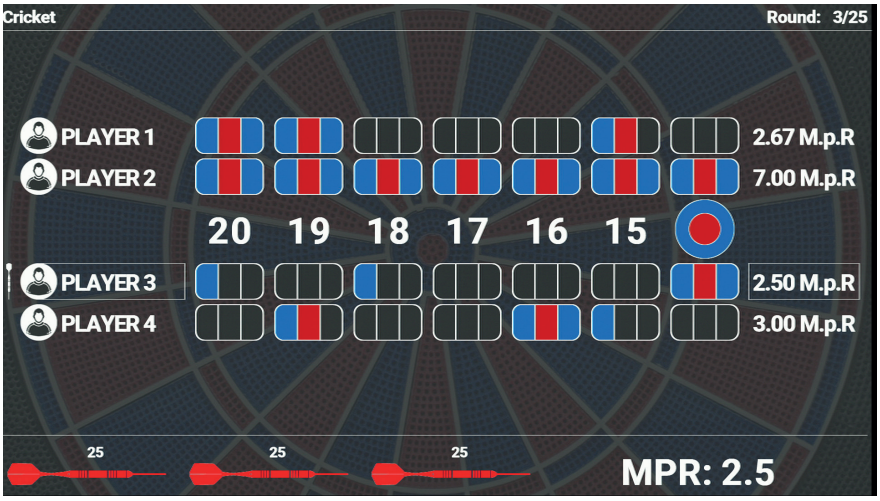




7.8. Cricket performance statistics

M.p.R. (Marks per Round) **Shows the average number of marks per round.**





NOTICE:
Darts that hit segments already closed out by all players do not count as marks.

8. Programming the various options

8.1. Calling service mode

1. Press the [**SERVICE**] button in the electronics compartment.
2. If necessary: If an authorization code has been configured, enter it.
3. Press the [**CHANGE PLAYER**] button for at least three seconds to leave the service menu.

Übersicht der allgemeinen Funktionen:

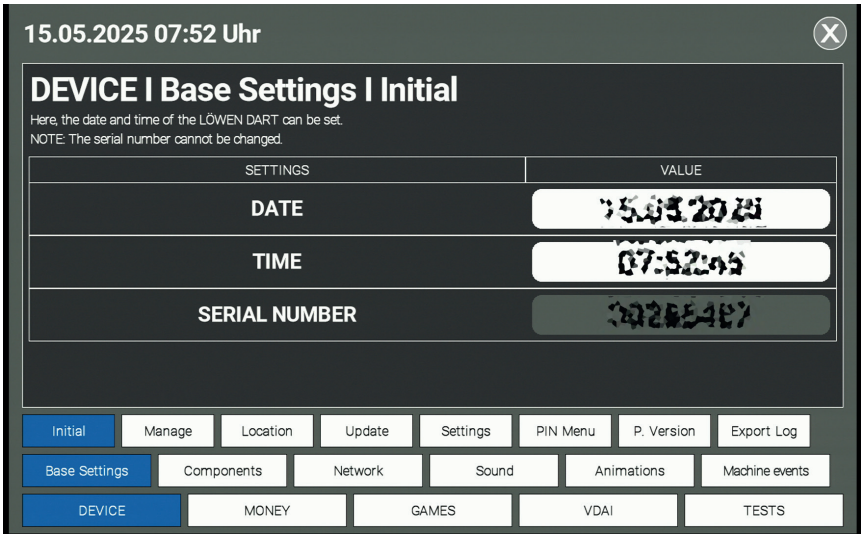
Level 1	Level 2	Level 3	Description	Page
Device	Basic settings	Initial:	Set data, time and machine number	38
		Manage	Load and save configuration. Resert machine	39
		Update	Update machine	40
		Settings	Power failure, credit reset, dart alarm, animation melody, stepper bonus	41
		PIN menu	Pin settings	42
		P.-version	Program versions	42
		Export Log	Log files (printout)	43
	Components		Activate/deactivate BNCD/CCD	44
	Network		Networking the machine	37
	Sound	Sound level	Set sound level	52
		Tones	Activate/deactivate tones	
	Animation		Activate/deactivate	53
	Machineevents		LOG file of machine events	53
Money	Crediting		Enter number of credits per monetary value and defined cash channel andvalue	54
	Acceptance		Activate/deactivate individual channels(-coins/notes)	54
	Prices (x01)	301	Configuration of prices for individual games	55
		501		
		701		
		301Elimination		
	Prices (other)	Cricket		
		Training		
		Highscore		
		Split Score		
		Shanghai		
		Rapid Fire		
	Statistics		Cash management statistics	56
	Cash events		Log of cash events	56
Games	Basicsettings	Game options:	Blocked players, player change and free play	57
	Modesettings		Auto play deactivation, checkout ways	58
	Round limits	301	Round limits for individual games	58
		501		
		701		
		Cricket		
		Other		
	Statistics		Game statistics	59
VDAI			VDAI management	60
Tests			Tests of individual components	63

8.2. Device settings

8.2.1. Device | Basic settings | Initial

Tap the relevant white field to set the correct date and time on the darts machine. Enter the numerical values and save them.

Tap the white field to set the Device Number. Enter the numerical values and save them. The machine number is displayed on the VDAI printout.



NOTICE:

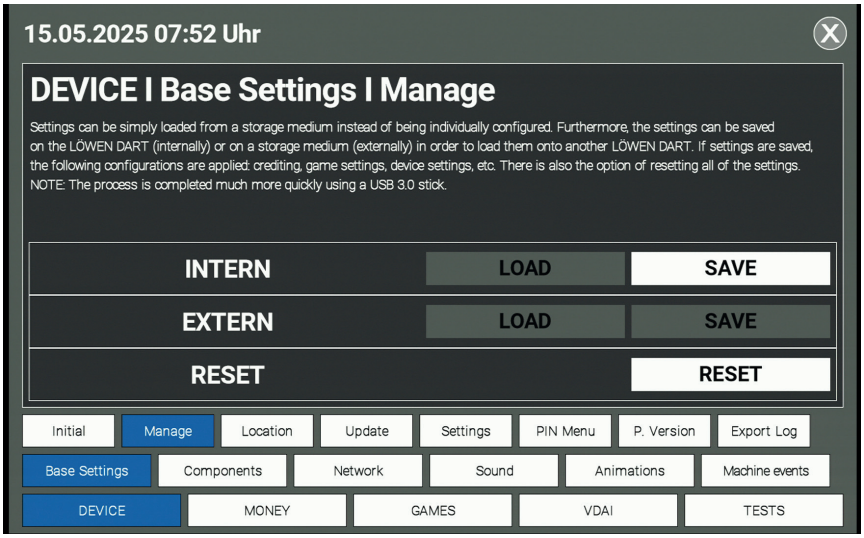
The machine number can be entered only once. Once it has been saved, it cannot be changed. The field is grayed out.

8.2.2. Device | Basic settings | Manage

The user settings such as the game settings, game system features and stepper bonus credits can be saved internally and externally.

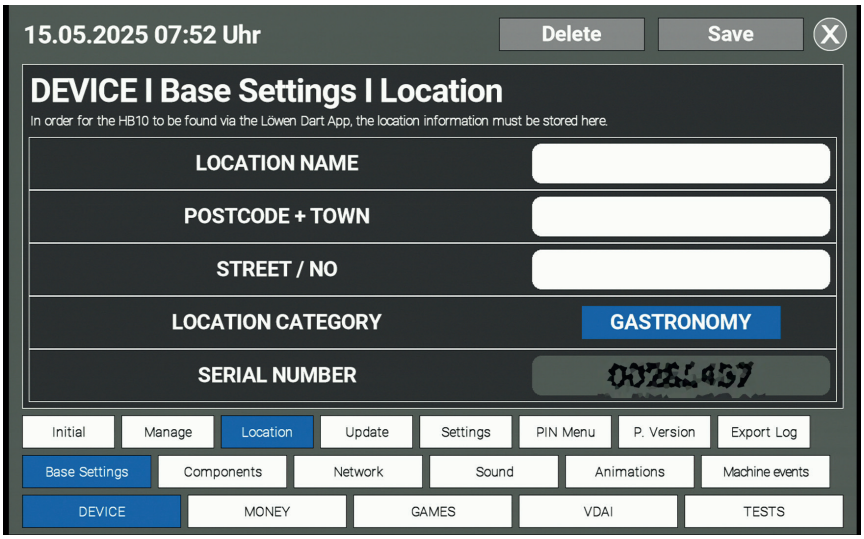
User settings can be transferred to other machines using a USB stick. The machine number is not copied over.

When the machine is reset, the factory settings are restored. All changes are lost.



8.2.3. Device | Basic settings | Location

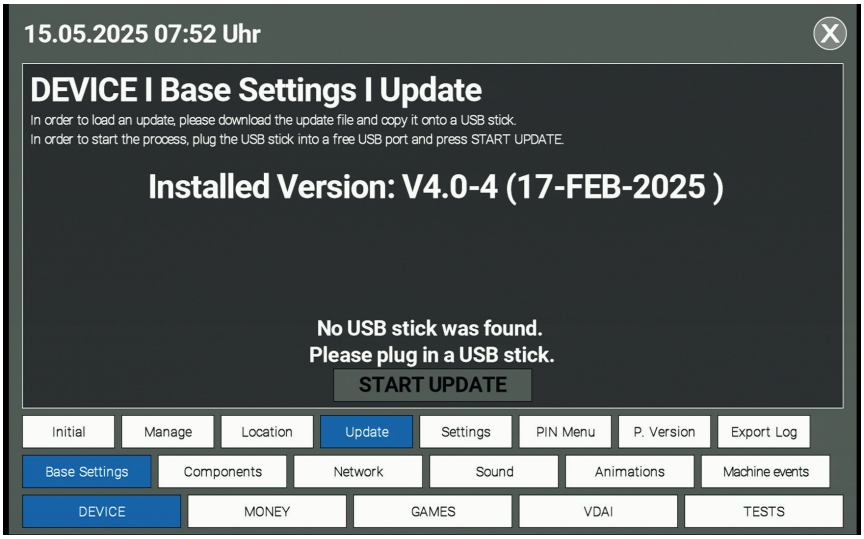
The device can be displayed via the Löwen Dart app by entering the location.



8.2.4. Device | Basic settings | Update

A USB stick can be used to perform a program update. All settings are lost when a program update takes place.

For the latest program versions, see www.loewen-service.de.



8.2.5. Device | Basic settings | Settings

Power Fail

[**ACTIVE**] The current game can be continued following an outage. Credits are retained.

[**INACTIVE**] The game is not continued following an outage. Credits are lost.

Credit reset

Once this time (in minutes) expires, the machine returns to the main menu if the credit level is 0 and no user entry is made. Alternatively, it returns to the game selection menu after a game finishes.

Dart alarm

[**ACTIVE**] The machine sounds an alarm if darts are thrown when there is no credit.

[**INACTIVE**] No alarm sounds.

Animation melody

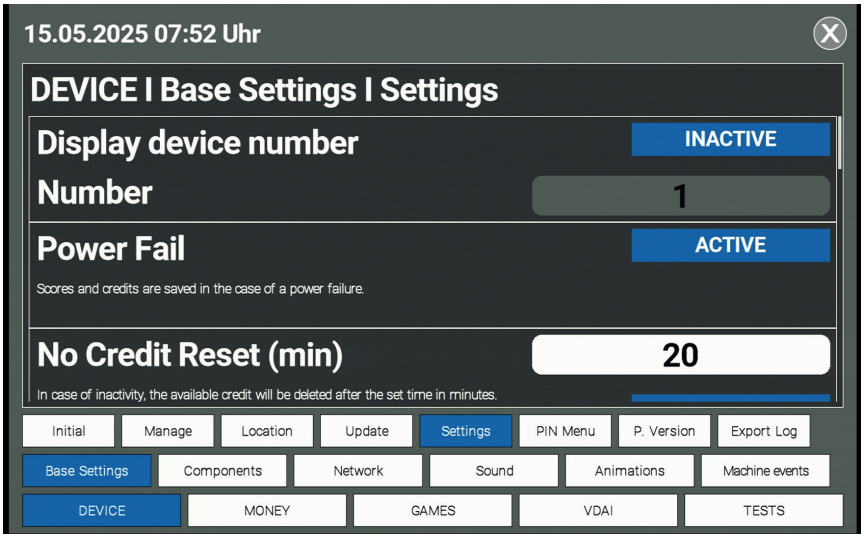
[**ACTIVE**] Animation melody activated

[**INACTIVE**] Animation melody deactivated

Stepper bonus

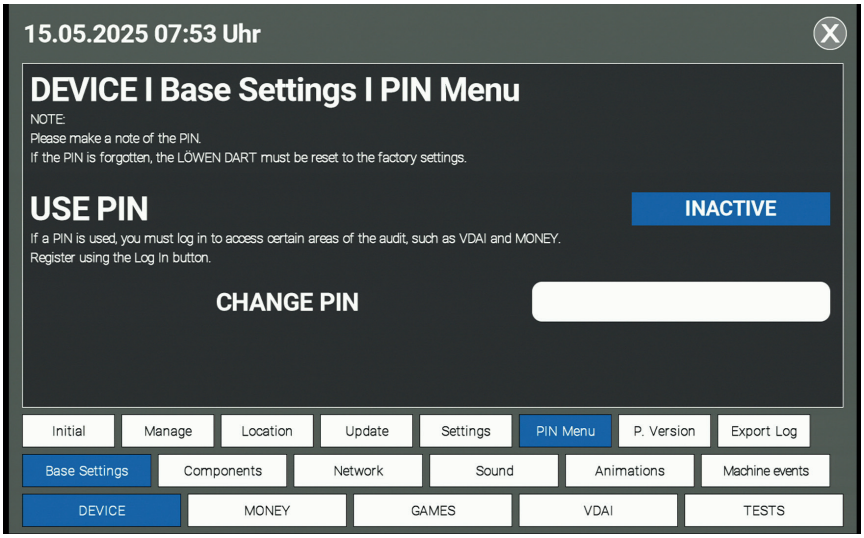
[**ACTIVE**] The number of credits of the credit amount above is awarded if the game price for the credit amount above is lower. Each time a game starts, the internal counter is reset to 0 („8.2.15. Money | Crediting“ on Page 54).

[**INACTIVE**] Only the credits for the relevant credit amount per coin are awarded.



8.2.6. Device | Basic settings | PIN menu

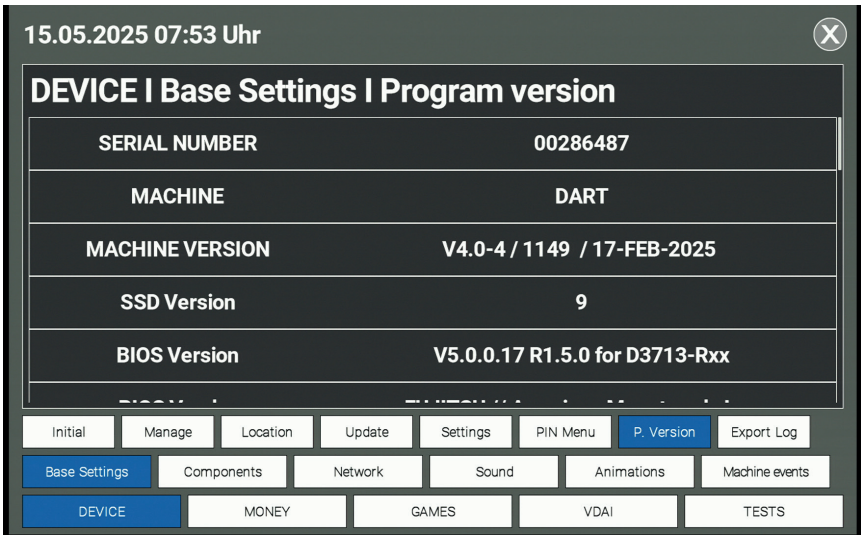
A four-digit authorization code can be configured here to protect the machine against unauthorized access.
This code must then be entered in money mode and VDAI mode.



NOTICE:
If the authorization code is entered incorrectly, the machine is locked against logins for a certain period of time. This time period is extended with each incorrect attempt.
If the pin is lost, the machine can be reset (see „8.2.2. Device | Basic settings | Manage“ on Page 39).

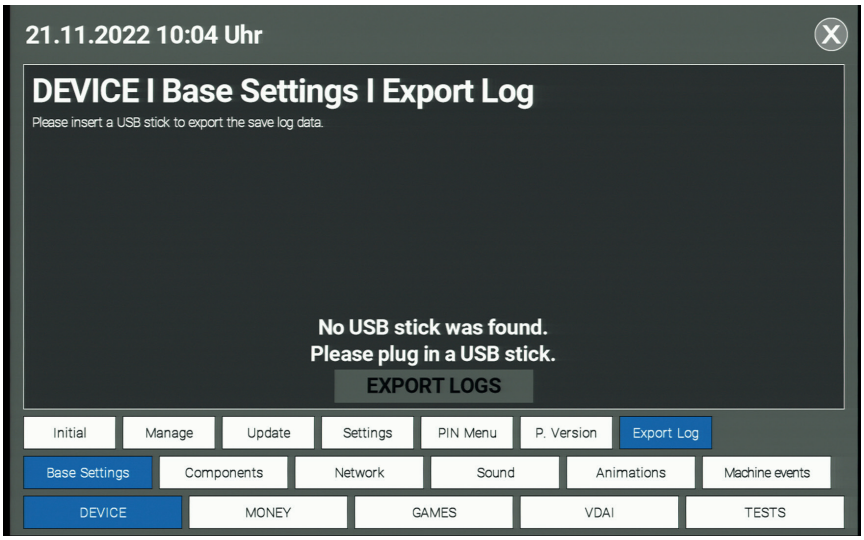
8.2.7. Device | Basic settings | P. version

The currently installed software versions are displayed here.



8.2.8. Device | Basic settings | Export log

Various log files are written to a USB stick.

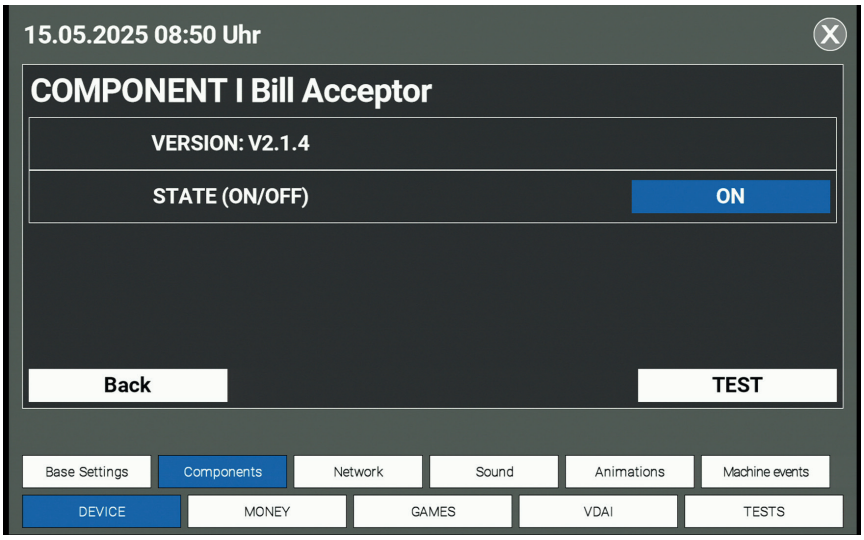


8.2.9. Device | Components

Overview of connected components and software versions. A further menu is available in selected components.

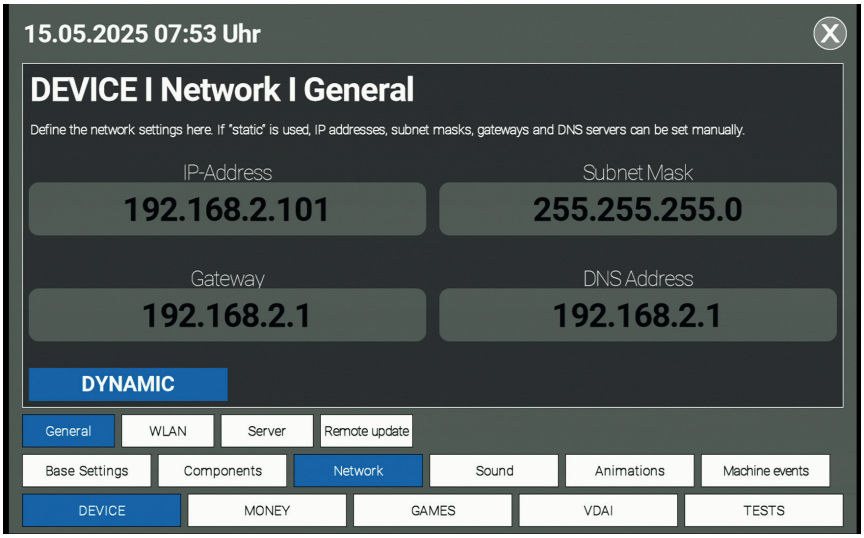


In this menu (e.g., Bank note checking device), you can activate/deactivate components. In this menu, you can also navigate directly to test mode for the component in question; see „10. Tests“ on Page 63.



8.2.10. Device | Network

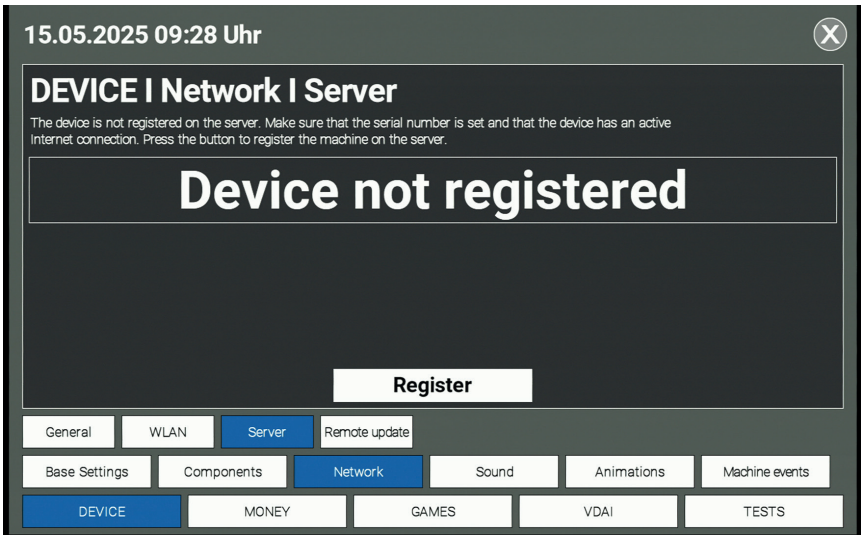
DHCP
Connect the network interface at the back of the machine with your existing network (for example, router). Check the configuration.



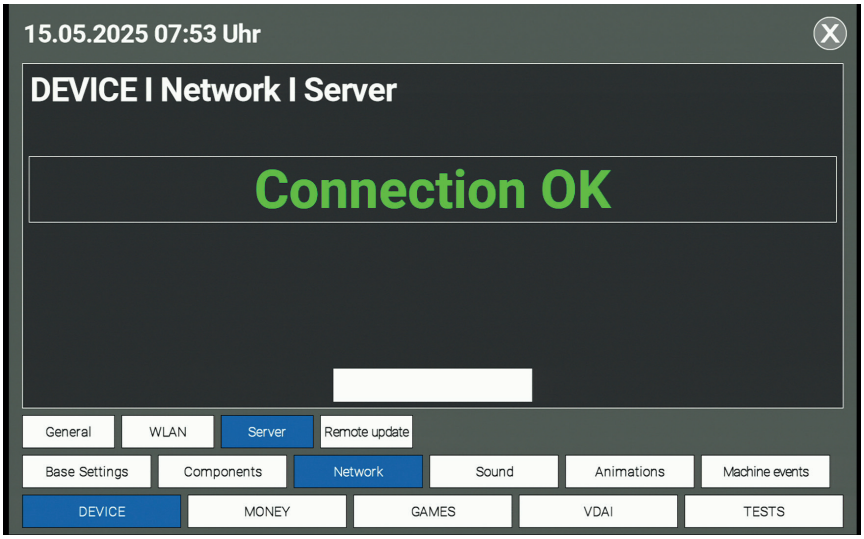
Press[**SERVER**]. Press [**Register**].



NOTICE:
If the machine is already registered, this step will not be displayed

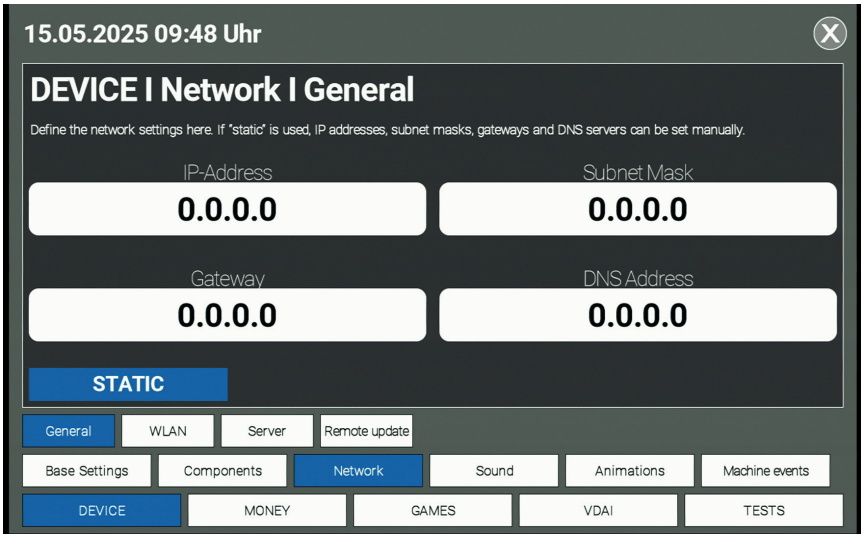


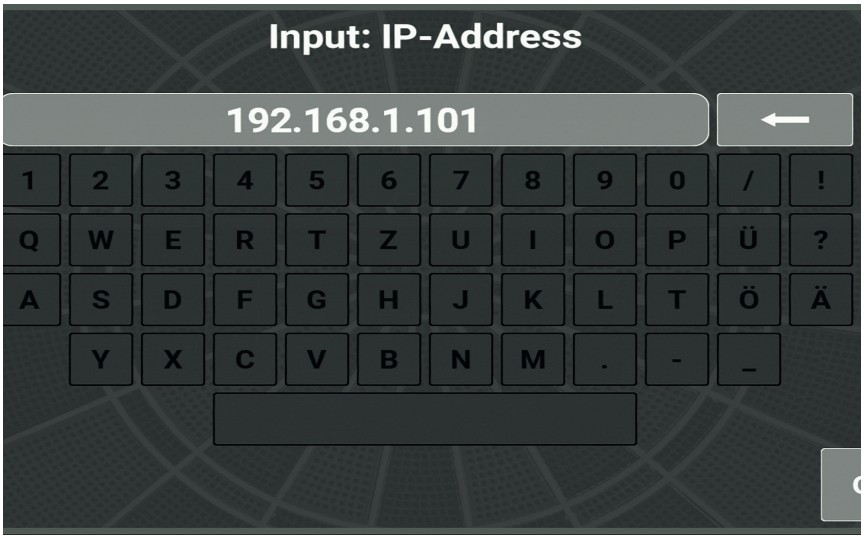
Press [**Check the connection**].



Manual IP

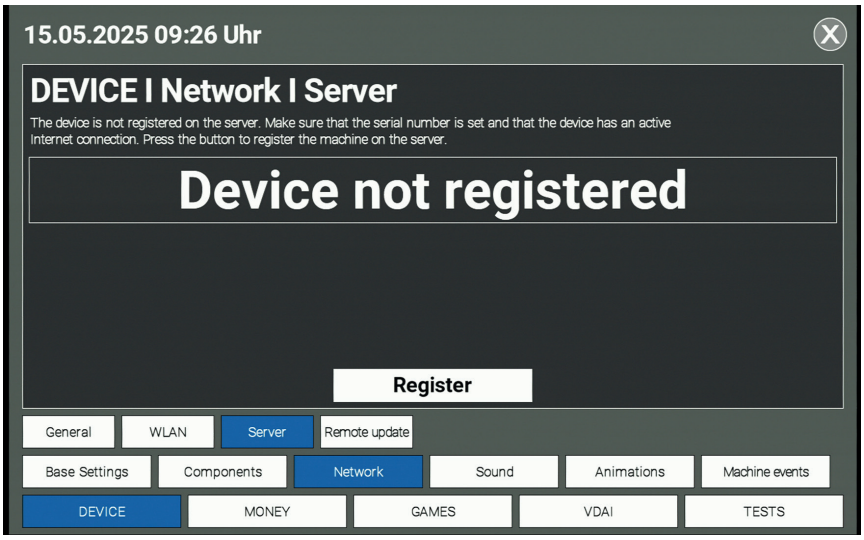
Tap the [DYNAMIC] button. It will change to [STATIC]. Now tap the white squares and enter the corresponding configurations. Enter the IP address and confirm with [OK]. Repeat the procedure with Gateway and DNS Address. The connection is established.



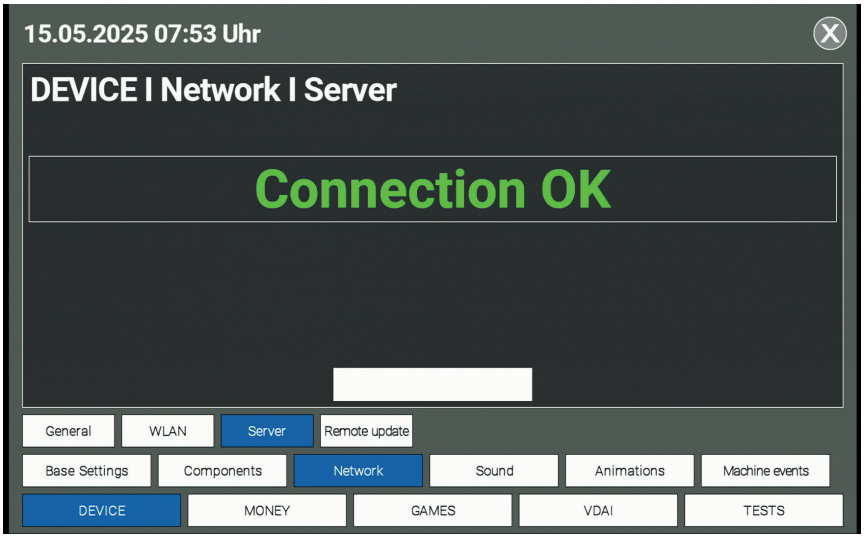


Press[**SERVER**]. Press [**Register**].

NOTICE:
If the machine is already registered, this step will not be displayed.

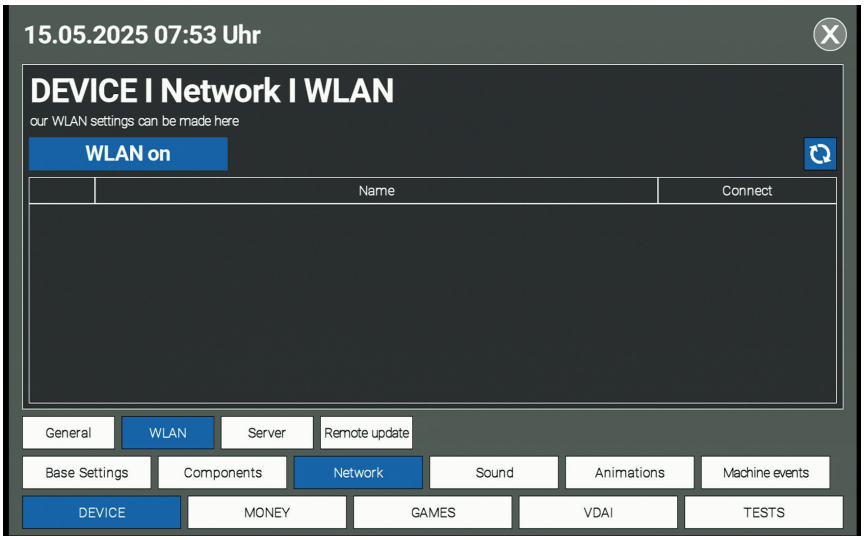


Press [**Check the connection]**.

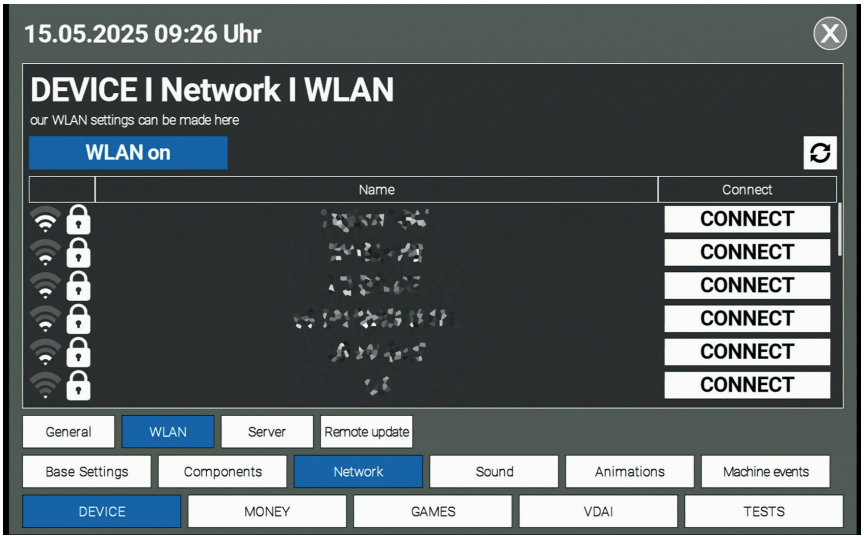


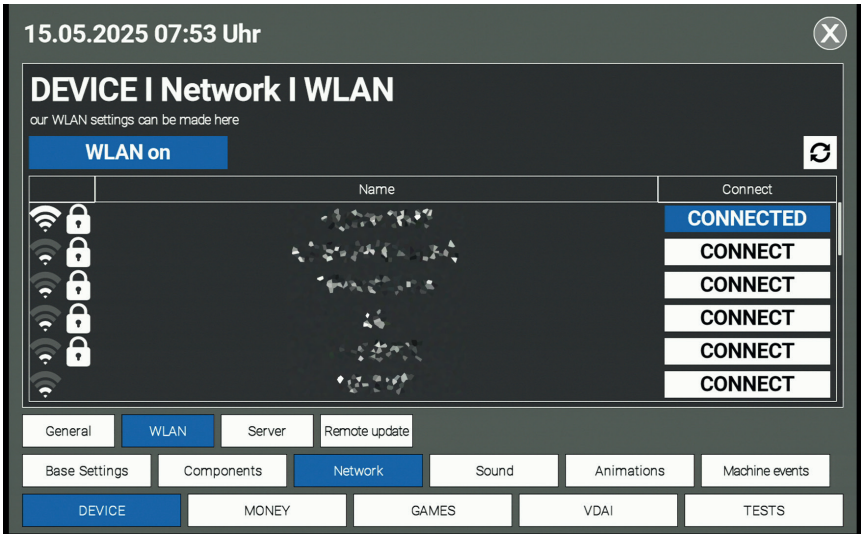
WLAN

Tap the [WLAN off] button. It changes to [WLAN on].

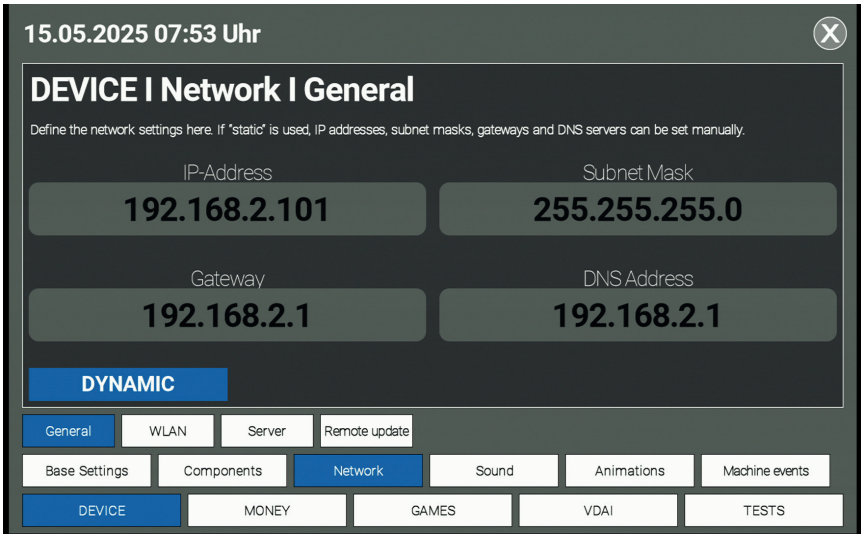


Select your WLAN and enter the password. The machine connects to your WLAN



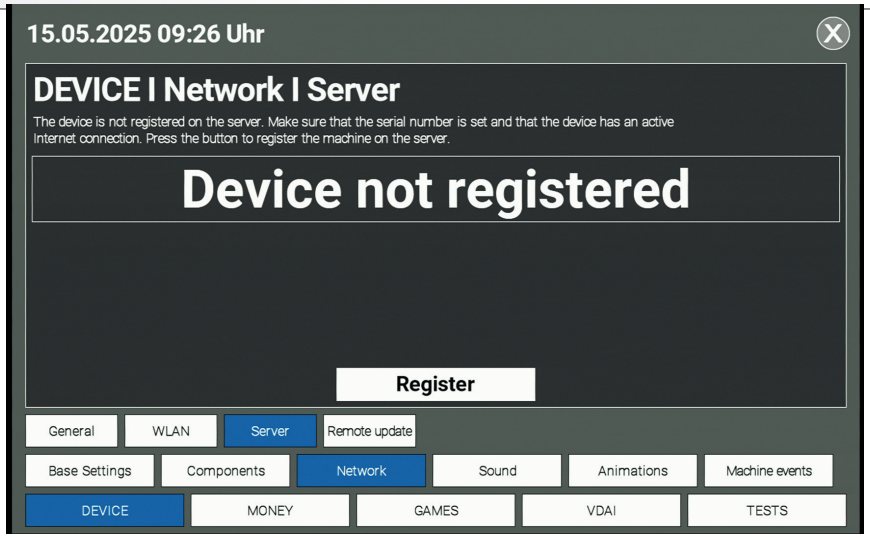


Tap [General] to view the configuration.

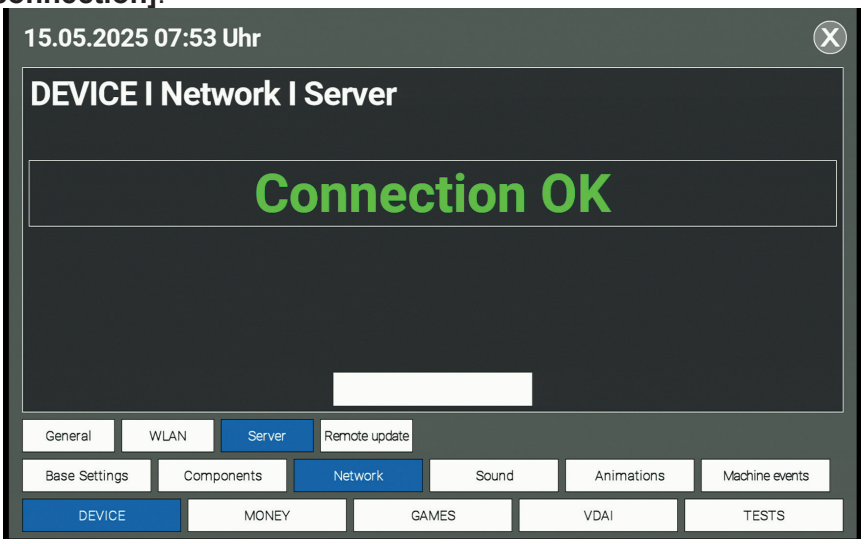


Press[**SERVER**]. Press [**Register**].

NOTICE:
If the machine has been registered already, this step will not be offered anymore.

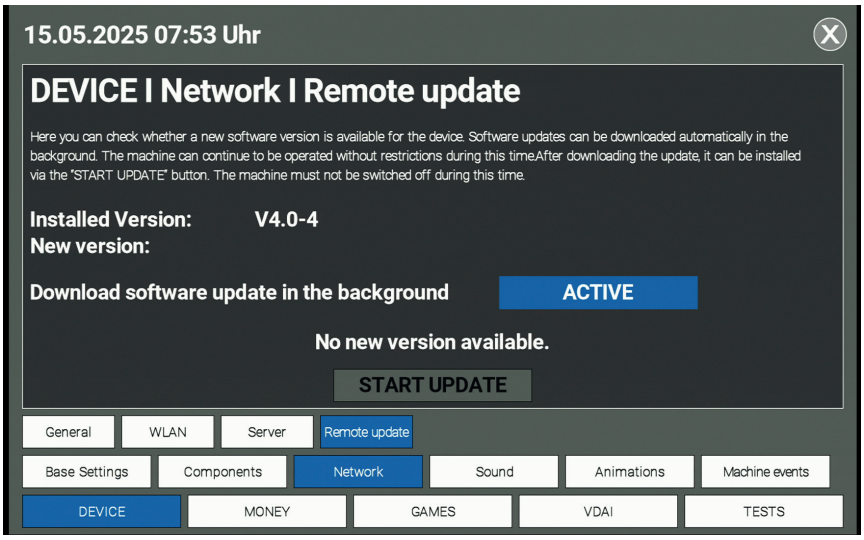


Press [**Check the connection**].



8.2.11. Device | Network | Remote update

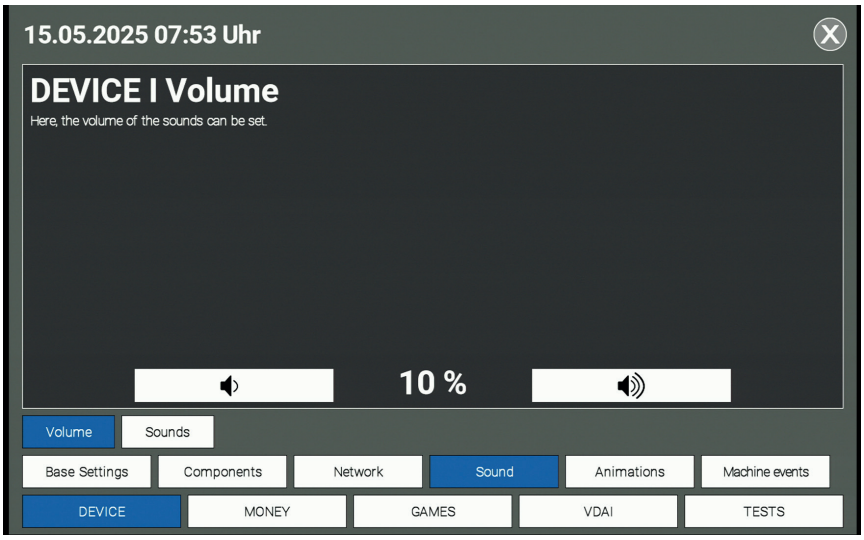
As soon as a new update is available, it can be downloaded and installed with [**START UPDATE**] to install it.



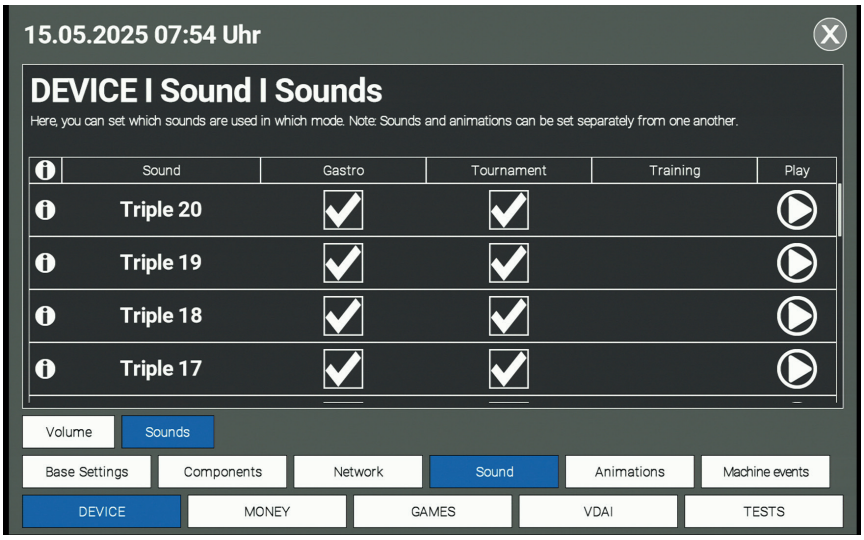
NOTICE:
Don‘t switched off the device during the update.

8.2.12. Device | Sound | Sound level

To set the general sound level, tap the left loudspeaker symbol (quieter) or the right loudspeaker symbol (louder).

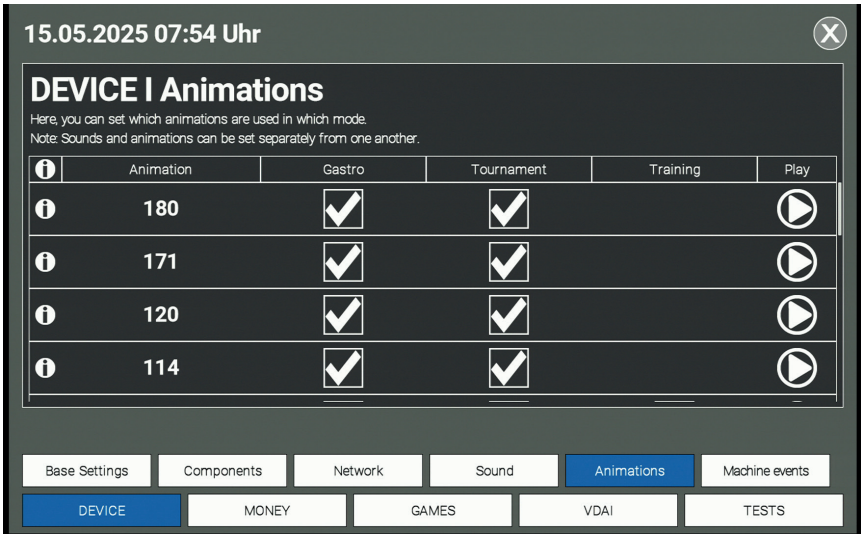


The individual tones (if available in the selected mode) can be activated and deactivated. The ▶ symbol can be used to listen to the sounds.



8.2.13. Device | Animation

The individual animations on the top screen (if available in the selected mode) can be activated and de-activated. The ▶ symbol can be used to watch the animations.



8.2.14. Device | Machine events

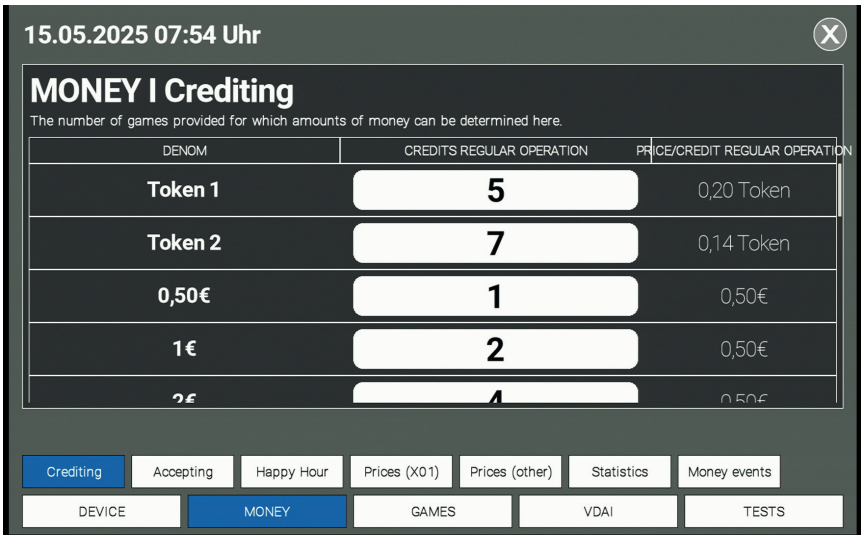
The machine events are logged here.



8.2.15. Money | Crediting

Here, the credit prices can be entered and the defined cash channels and denominations can be displayed.

NOTICE:
The channels “Token1” and “Token2” are only offered if the coin selector is programmed for tokens („5.8. Care and maintenance“ on Page 22)

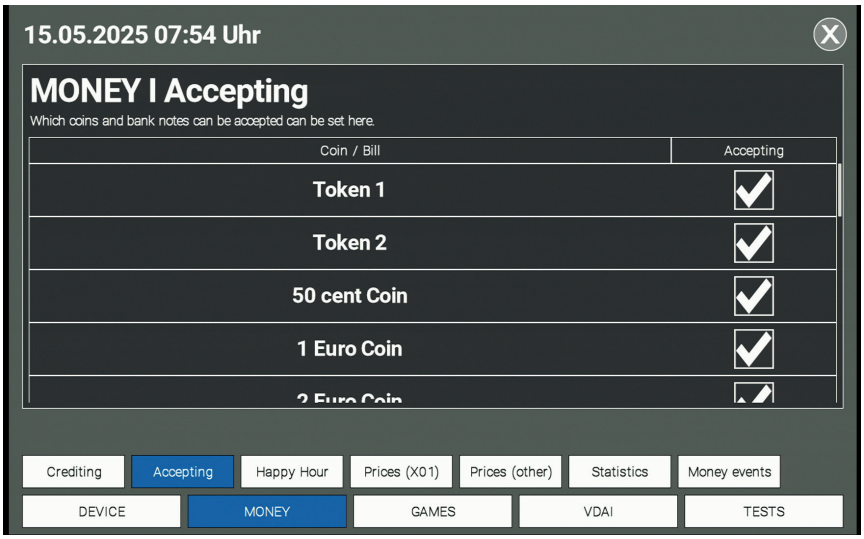


Overview of factory settings

Denomination	Credits	Price per credit
0.50 €	1	0.50 €
1 €	2	0.50 €
2 €	4	0.50 €
5 €	12	0.41 €
10 €	25	0.40 €
20 €	52	0.38 €

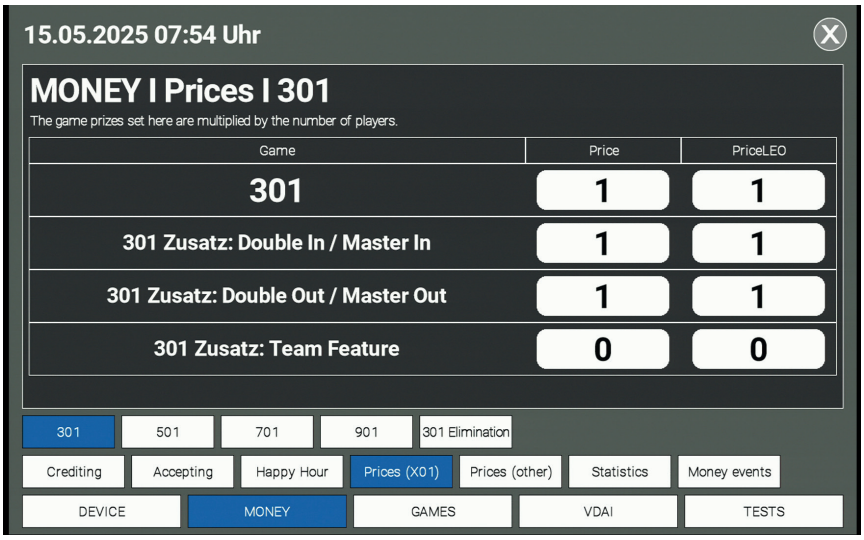
8.2.16. Money | Acceptance

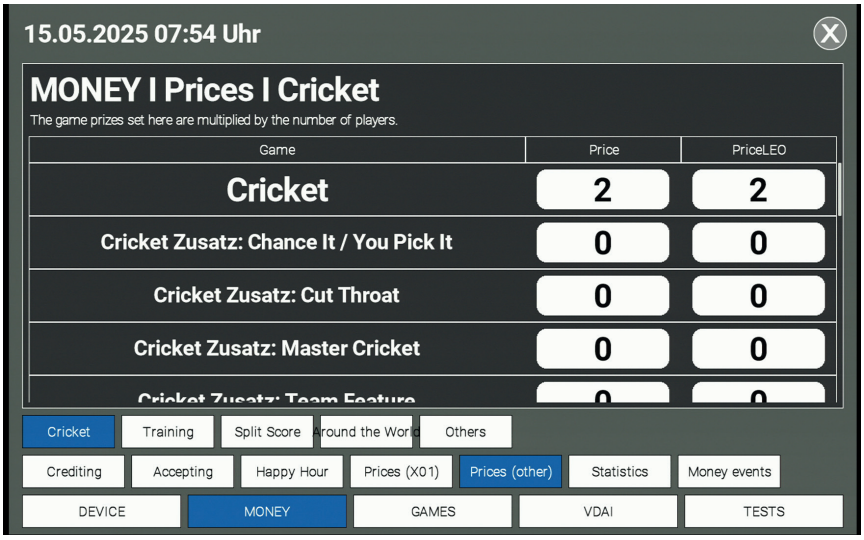
The individual cash acceptance channels can be activated or blocked here.



8.2.17. Money | Prices

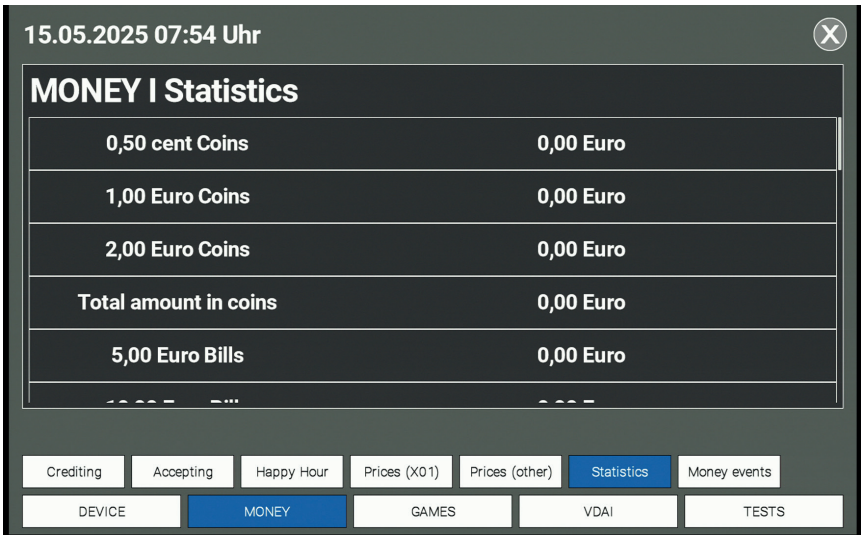
The number of credits per game and additional feature can be set individually here.





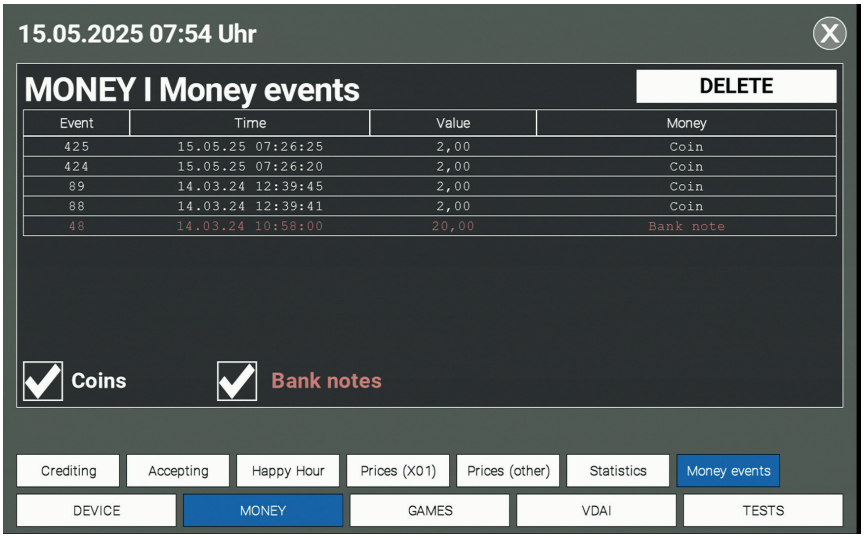
8.2.18. Money | Statistics

Here you can display the cash registered in the individual cash channels and the overall value of all registered cash.



8.2.19. Money | Cash events

The types of money registered in the individual cash events can be seen here.



8.2.20. Games | Basic settings

Blocked players (team)

[**BUST**] The „0“ throw is evaluated as a bust and the game is continued.

[**LOSE**] The team loses if a blocked player reaches 0.

Change player

[**Slow**] The player change takes place three seconds after the player presses the [CHANGE PLAYER] button or leaves the sensor detection range.

[**Fast**] The player change takes place two seconds after the player presses the [CHANGE PLAYER] button or leaves the sensor detection range.

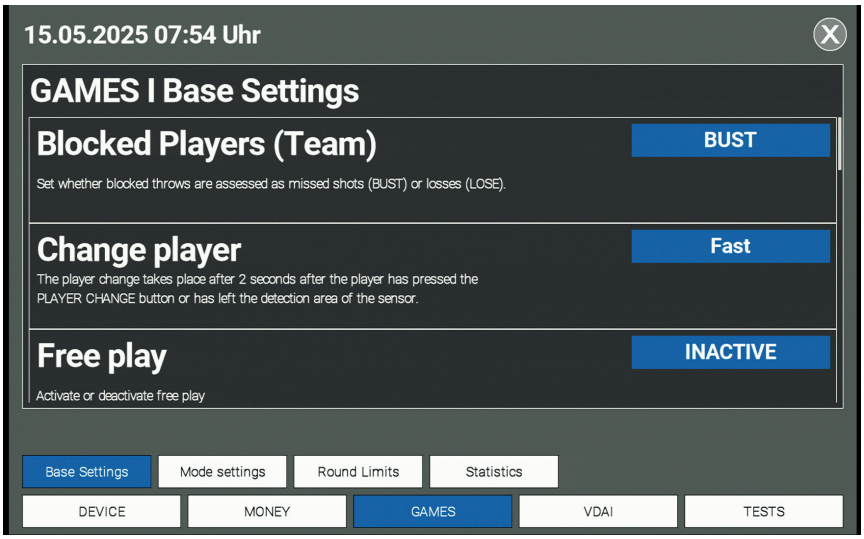
[**Immediate**] The player change takes place three seconds after the player leaves the sensor detection range. If the [CHANGE PLAYER] button is pressed, the player change takes place immediately.

[**Deactivated**] The player change takes place after three seconds only if the [CHANGE PLAYER] button is pressed.

Freispiel

[**ACTIVE**] No money is required to start games. The machine is in free mode. This mode is displayed as „Free play“ in the credits in the game selection.

[**INACTIVE**] No free games



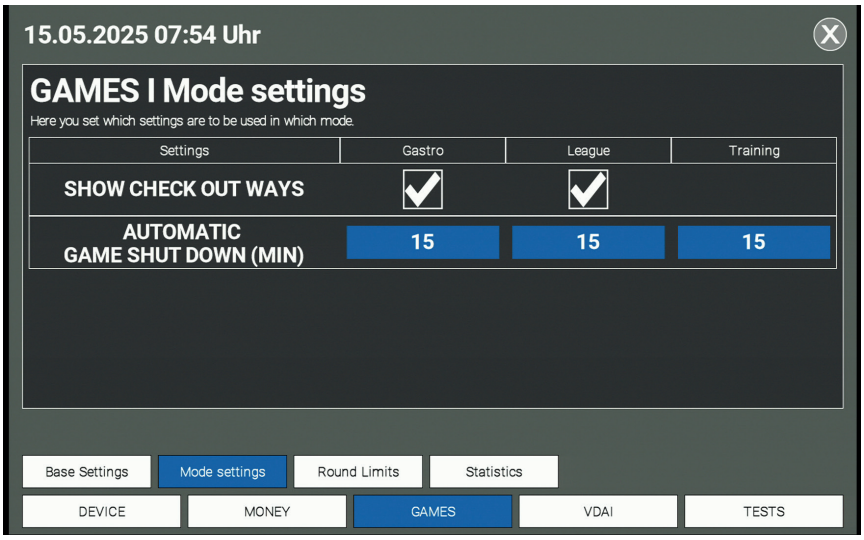
8.2.21. Games | Mode settings

Check out Ways

Auf dem oberen Monitor wird angezeigt, mit welcher Wurfkombination der Spieler sein Spiel beenden kann (x01 Spiele und 301 Elimination).

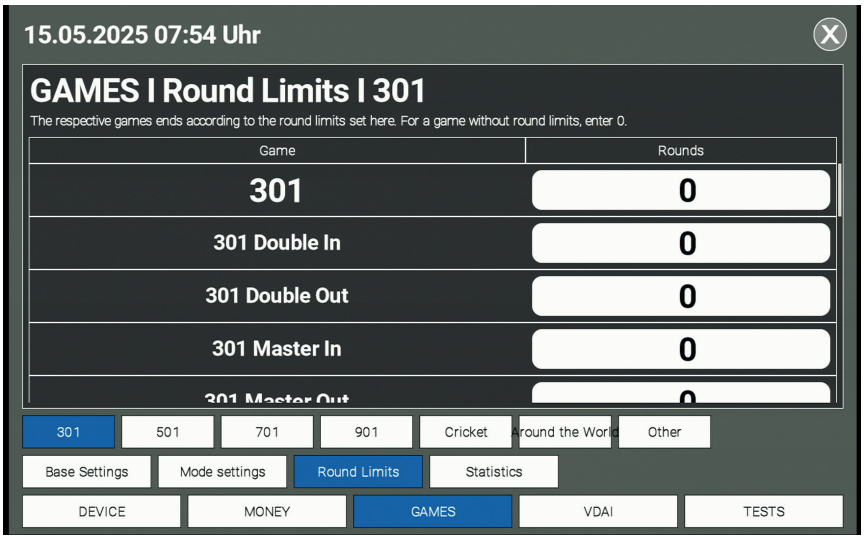
Automatic Game shut down

Here, you enter the time that may pass without a dart throw being registered before a reset is triggered. A new game can be started once the current game has been reset. The deactivation time can be set in 15-minute intervals in a range from „OFF“ to 60 minutes.
Factory setting: 15 minutes



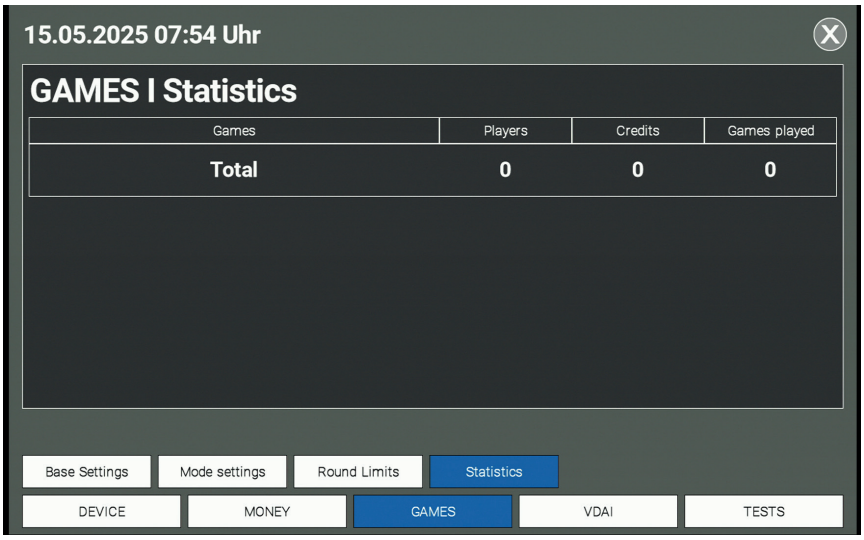
8.2.22. Games | Round limits

The number of round limits per game and additional features can be set individually here. „0“ means no round limit.



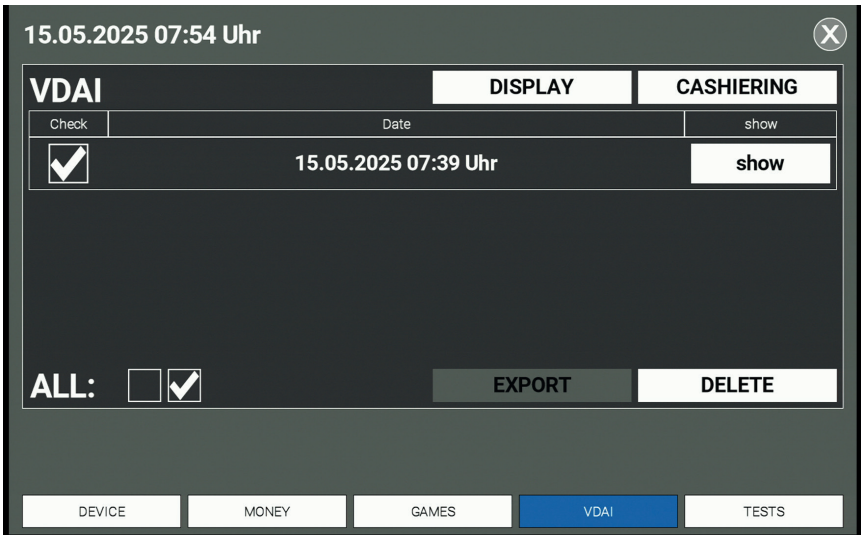
8.2.23. Games | Statistics

For each game, the statistics show the number of players, number of used credits and number of played games. Subtotals are displayed for each game with the overall total at the end of the list.



9. VDAI

All previous VDAI printouts are listed here. These can be read directly on the screen or exported using a USB stick. On the USB stick, they are saved in a subfolder as VDAI files.



NOTICE:

The saved printout is independent of the settings on the reading device. A full printout is always saved.



Example of a long printout.



NOTICE:

The printout on the reading device is independent of the peripheral devices used and of the settings on the reading device. Below is an example printout. It is not a true reproduction of an actual printout!

```
| 2021-11-18T09:29+01:00   |
| DATAreader V03.64        |
| Auslessp: DRSpeicher     |
|   <-- LOEWEN DART -->    |
|                          |
| NR:    08154711          |
| SYSTEM: HB10             |
| PCB: V1.00               |
| PROG: V00.10.06          |
| AUSDRUCK NR:. 1          |
|                          |
| .                        |
|                          |
| ------------------------ |
|       BUCHHALTUNG        |
| ------------------------ |
|                          |
| MUENZGELD:               |
| 2,00 =      54,00 EU     |
| 1,00 =       0,00 EU     |
| 0,50 =       0,00 EU     |
|         ============     |
|             54,00 EU     |
|                          |
| GELDSCHEINE:             |
| 20,00 =      0,00 EU     |
| 10,00 =      0,00 EU     |
| 5,00 =       0,00 EU     |
|         ============     |
|              0,00 EU     |
|                          |
| GESAMT:     54,00 EU     |
|                          |
| FREISPIEL:     0         |
|                          |
| .                        |
|                          |
| ------------------------ |
|       STATISTIKEN        |
| ------------------------ |
|       SPIELER KREDIT PP  |
```

Date and time of printout

Version of reading device

Memory name of reading device

Serialnumber

Coin channels

Denomination of channels

Note channels

Denomination of channels

Statistics

```
| 301         15   15    7 |
| 301DI        4    8    1 |
|                           |
| ELI          8   12    2 |
|                           |
| CRI          6   12    2 |
|                           |
| 301TOT      19   23    8 |
| CRITOT       2   12    2 |
| ELITOT       8   12    2 |
|                           |
| TOTAL       33   47   12 |
|                           |
| ------------------------- |
|          SYSTEM           |
| ------------------------- |
|                           |
| AGI SSP_BI                |
| V2.1.4      C1050.0       |
| BV2.1.20    P40960        |
|                           |
| G-13.mft                  |
| V4.15.9     C1.0          |
| ---         P1            |
|                           |
| easyTOUCH                 |
| V3.37       ---           |
| ---         ---           |
|                           |
| DART IO DEVICE            |
| 1.16                      |
|                           |
| DART TARGET DEVICE        |
| 1.11                      |
|                           |
|                           |
| UHRZEIT:                  |
|        18.11.2021 09:50   |
|                           |
| END                       |
```

Device program versions

Date and time

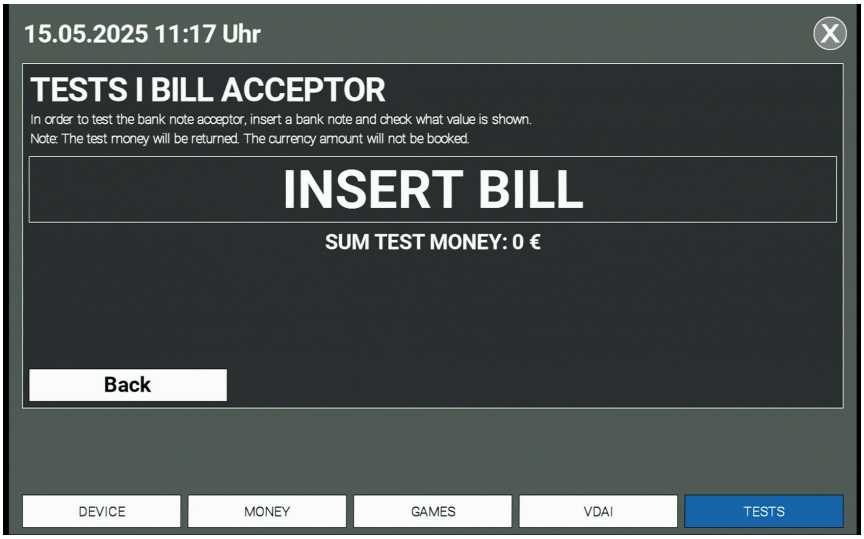
10. Tests

A range of test functions are available to check that the individual components are working properly. These are called using the [**Start**] button.



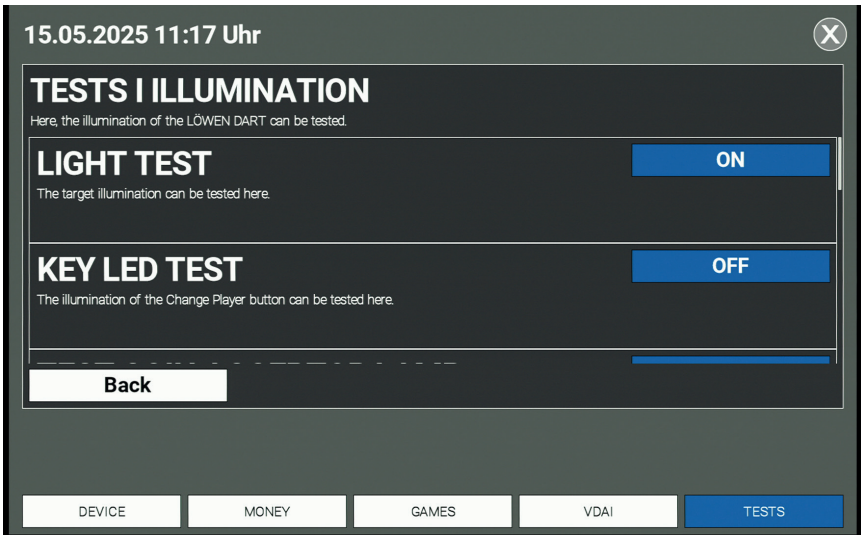
10.1. Bank note checking device

Displays the value of the entered bank note and returns the bank note. The bank note is not included in accounting.



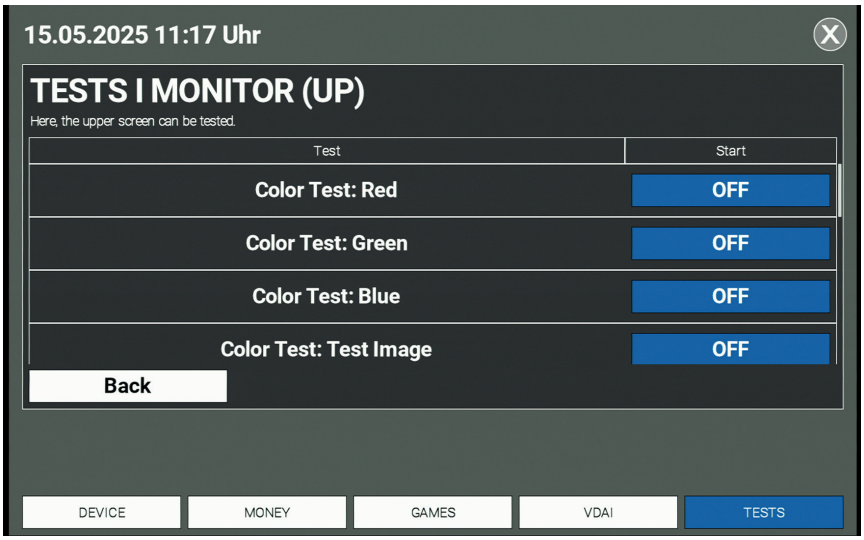
10.2. Illumination

To test the target lighting, button lighting or coin checking device lighting, press the corresponding button.



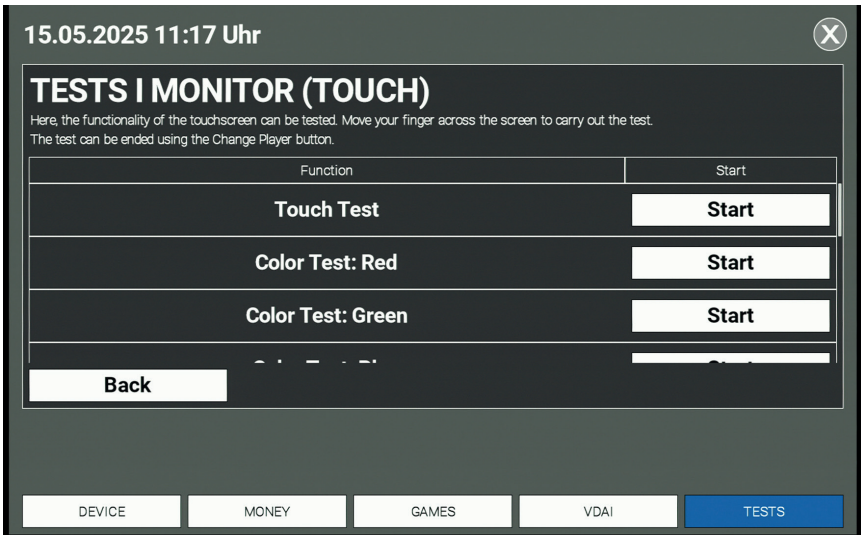
10.3. Screen (top)

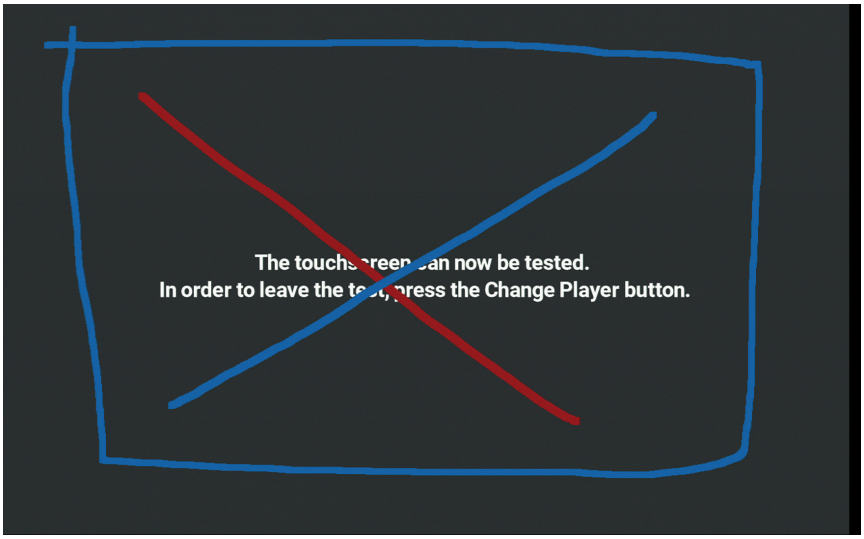
Test the top screen with a primary color or test image.



10.4. Screen (touchscreen)

Test the bottom screen with a primary color or test image. If you tap the screen again, the test menu appears again. You can also test the touch function.





10.5. Coin checking device

Displays the value of the inserted coin. The coin is not included in accounting.



10.6. MISS sensor

For testing the MISS sensor. Tap the MISS ring or target door to check the sensor. Alternatively, perform the test with darts. You can calibrate the sensitivity of the sensor (see „5.4.3. Calibrating the dart sensor (piezo sensor)“ on Page 18).

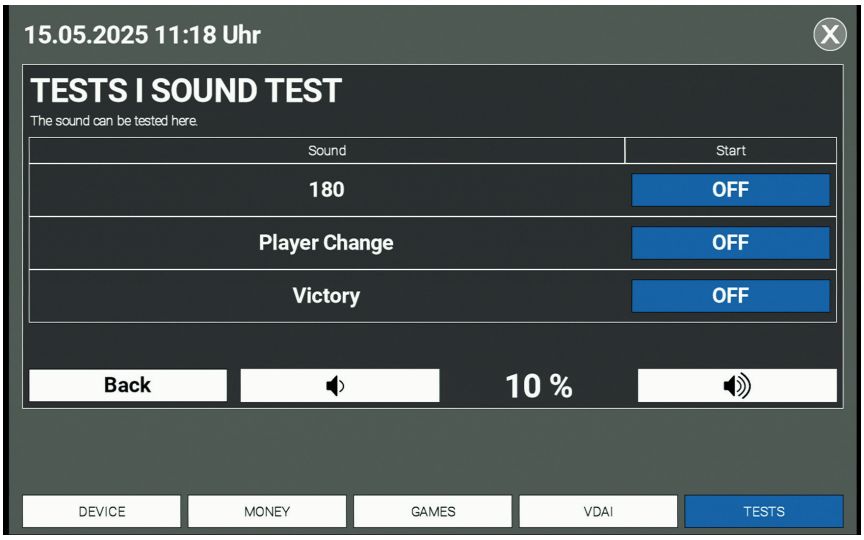


NOTICE:
Taps or misthrows on the segments are not detected.



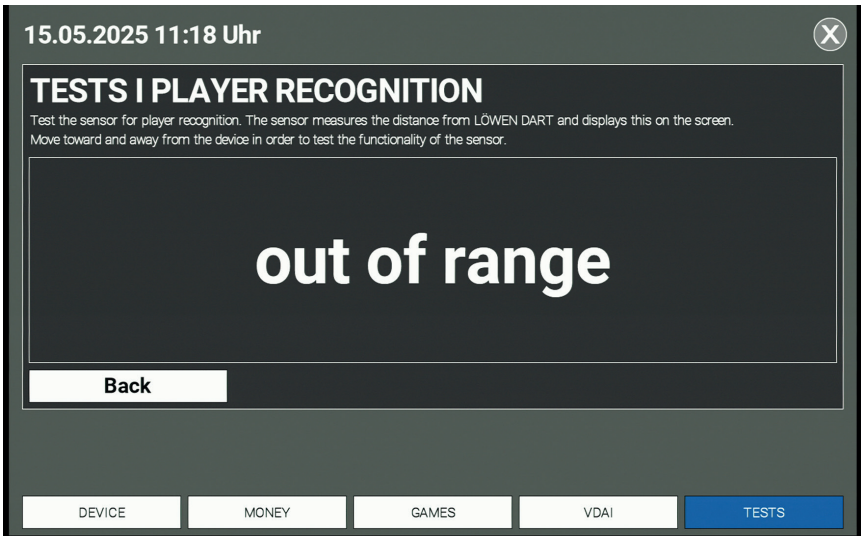
10.7. Sound

Audio function test. Press the blue button to play the sound. Press again to switch it off. The sound can be changed and is saved.



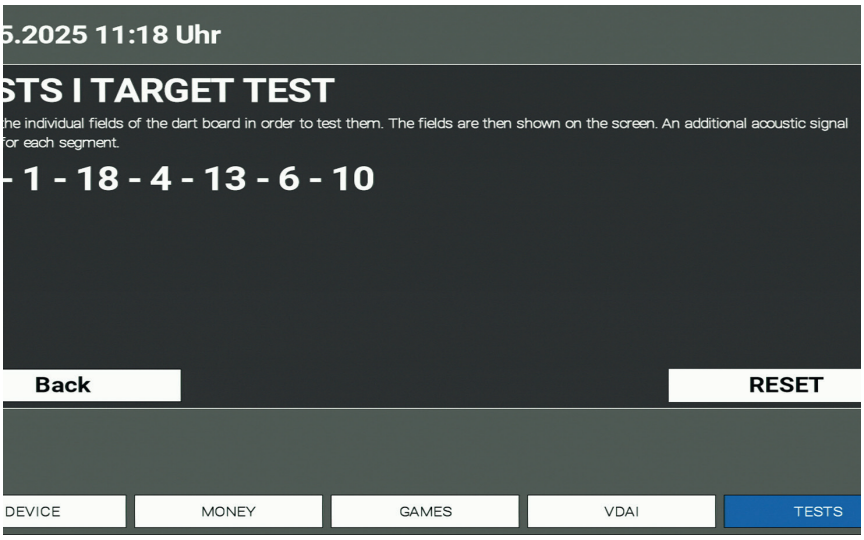
10.8. Player detection sensor

Infrared sensor test. The sensor measures the distance of the player from the machine. If nobody is detected, the [Out of range] signal is sent.



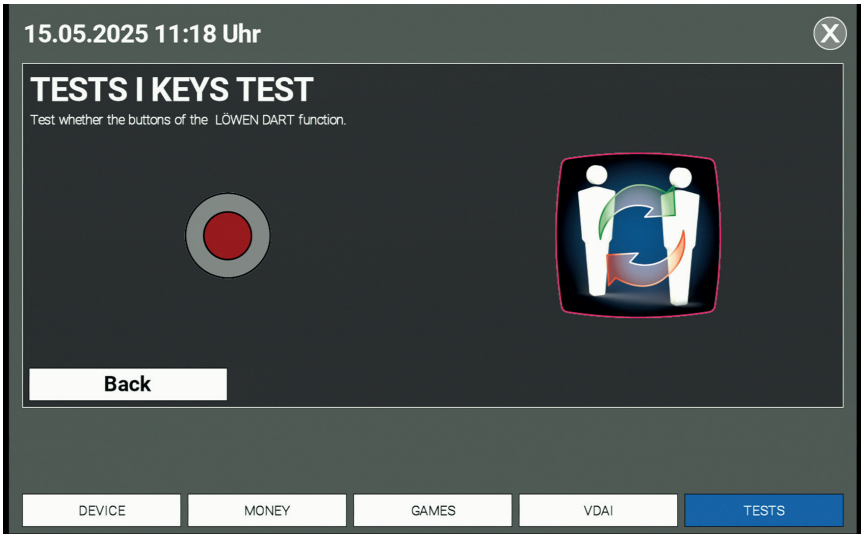
10.9. Target

This test determines whether each individual segment of the dartboard correctly detects hits.
Tap a segment to display the value.



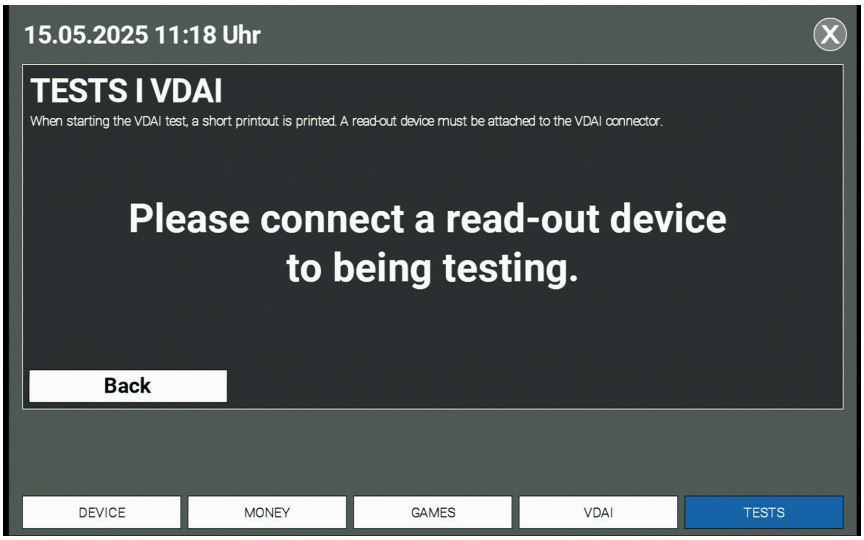
10.10. Buttons

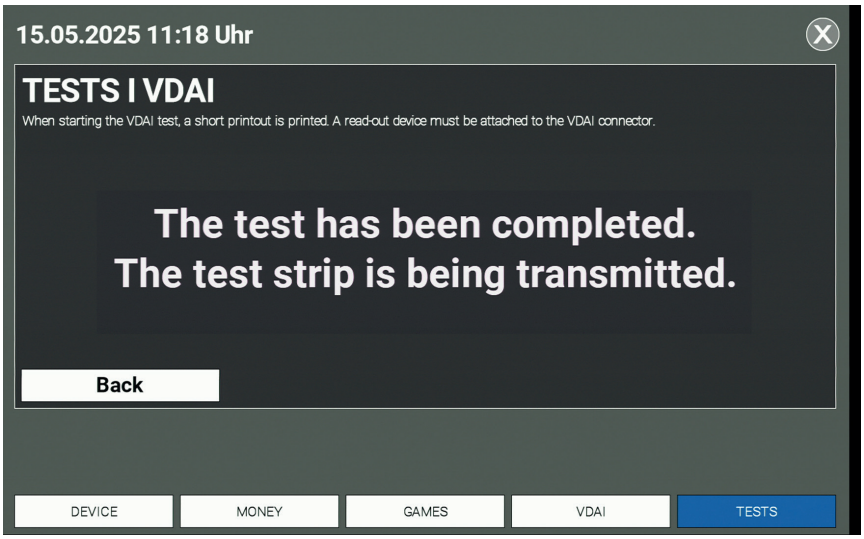
This test tests all of the buttons. The brightness of the button symbol on the screen changes momentarily



10.11. VDAI interface

A read-out is made for this test.





11. EG-Konformitätserklärung

CE

EG-Konformitätserklärung
(Richtlinie 2014/35/EU und 2014/30/EU)

EC-Declaration of Conformity
(Directive 2014/35/EU and 2014/30/EU)

Dokument – Nr./document no.:	EG_HB10_V1.docx
Hersteller/manufacturer:	**Löwen Entertainment GmbH**
Anschrift/address:	**Saarlandstraße 240** **55411 Bingen**
Produktbezeichnung: Product specification:	**Compactsportgerät LÖWEN DART** **Dart Device LÖWEN DART**
Typen/types:	**HB10 (522)**

Hiermit wird bestätigt, dass oben bezeichnete Produkte der Richtlinie 2014/35/EU des Europäischen Parlaments und des Rates zur Angleichung der Rechtsvorschriften der Mitgliedstaaten betreffend elektrische Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen und der Richtlinie 2014/30/EU des Europäischen Parlaments und des Rates zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit entsprechen.

Hereby we confirm that the above mentioned products are in compliance with the directive 2014/35/EU of the European Parliament and of the Council on the harmonisation of the laws of the Member States relating to electrical equipment designed for use within certain voltage limits and directive 2014/30/EU of the European Parliament and of the Council on the approximation of the laws of the Member States relating to electromagnetic compatibility.

Zur Beurteilung der Erzeugnisse wurden folgende Normen herangezogen:
For evaluation of product compliance the following standards are used:

EN 60335-1:2012 + AC:2014 + A11:2014 + A13:2017 + A1:2019 + A2:2019 + A14:2019
EN 60335-2-82:2003 + A1:2008 + A2:2020
EN 55032:2015 + A11:2020
EN 55035:2017 + A11:2020
EN 61000-3-2:2014
EN 61000-3-3:2013

Ort, Datum/place, date: Bingen, 07.02.2022

Aussteller/issued by: Löwen Entertainment GmbH

Rechtsverbindliche Unterschrift / Stempel:
Signature of authorized person / Stamp:

LÖWEN ENTERTAINMENT GmbH
Saarlandstraße 240
55411 Bingen
Tel.: +49 6721 407 0
Fax: +49 6721 407 519
Tobias Sprenger
Prokurist | Leiter F&E