



USER MANUAL

Standalone Electronic Dart Machine

BESKAR DARTS – Nova 01



This document is intended for end users, hospitality venue owners, and authorized service technicians, and serves as a guide for the proper use, installation, and maintenance of the BESKAR DARTS – Nova 01 standalone electronic dart machine.

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1 DEVICE DESCRIPTION

BESKAR DARTS – Nova 01 is a standalone electronic dart machine designed for professional use in hospitality venues, dart clubs, and similar public spaces. It provides automatic scoring, real-time display of results, and statistics tracking for one or more players.

The machine consists of an electronic target with sensors, a touchscreen for controlling games and settings, and an upper LCD display for showing scores and additional information. Control is performed via the touchscreen interface, while player changes can also be carried out using the dedicated button.

The Nova 01 supports various game modes, rule customization, credit-based operation, tournament mode, and post-game statistics. The machine features a robust construction suited for everyday use, with support for software updates and remote technical support. It is designed in accordance with applicable EU standards and the rules of official dart organizations such as **HPS** and **EDU**.

1.1 Package Contents

Your BESKAR DARTS Nova 01 is supplied with the basic equipment needed for installation and use. The package includes:

- BESKAR DARTS Nova 01 electronic dart machine
- a set of darts and matching accessories (spare tips and flights)
- power supply with cable (220 V)
- mounting bolts (described in section 5.2 – Assembling the Machine)
- throw line (described in section 5.5 – Installing the Throw Line)
- user manual
- EU Declaration of Conformity

2 BASIC TECHNICAL SPECIFICATIONS

2.1 Machine Dimensions

- Height: 232 cm
- Width: 61 cm
- Depth: 43 cm
- Weight: 72 kg
- Shipping dimensions: 120 × 62 × 83 cm

2.2 Power Supply

- Operating voltage: 12 V
- Maximum power consumption: 50 W

2.3 Displays

- Upper display: 21.5" HD
- Control display: 10.1" touchscreen

3 QUICK START GUIDE

3.1 Turning On the Machine

- Check that the machine is properly connected to power.
- Turn on the main switch located on the left side of the machine.
- Wait for the system to fully start up and show the home screen.

3.2 Starting a Game

- On the touchscreen, select the desired game mode.
- Enter the number of players and their settings.
- If required, insert coins or credit to start the game.

3.3 During the Game (Darts and Basic Functions)

- Throw the darts at the electronic target.
- The system automatically records the score and displays the results.
- At the end of a round, the player changes automatically or by pressing the dedicated button.

3.4 Exiting a Game

- To exit an active game, use the exit option on the touchscreen.
- Confirm the exit as prompted on the screen.
- A new game can be started by selecting the new game option on the screen.

3.5 Common Issues

- If the game will not start, check the credit balance.
- In the event of incorrect scoring, use the dart return option and check that the target is clean and properly secured. If necessary, also check the TUP sensor sensitivity setting.
- If the problem persists, contact an authorized service provider or the manufacturer.

4 SAFETY PRECAUTIONS

4.1 Electrical Safety

- Use the machine only with the specified power supply.
- Do not connect the machine to faulty or unstable electrical installations.
- Disconnect the machine from power before cleaning or servicing it.
- Do not disconnect the machine from power while the system is actively running.

4.2 Handling the Machine

- The machine is intended solely for playing electronic darts.
- Climbing, leaning, or hanging on the machine is prohibited.
- Avoid impacts to the cabinet, displays, and electronic target.
- Use the machine indoors only.

4.3 Gameplay and Safety

- Players must stand at the prescribed distance from the target.
- Do not walk in front of an active player during the game.
- Ensure sufficient free space around the machine for safe play.
- Do not throw darts while another player's dart is still in the target.

4.4 Children

- The machine is not intended for unsupervised use by minors.

4.5 Modifications and Prohibitions

- Opening the machine's housing without the manufacturer's approval is prohibited.
- Mechanical and electrical modifications to the machine are prohibited.
- Unauthorized interventions may cause malfunction and void the warranty.

5 SAFETY AND INSTALLATION

Proper installation of the machine is essential for safe operation, accurate scoring, and long-term use of the device.

5.1 Transport and Protection

- During transport, the machine must be protected from impacts, vibration, and moisture.
- Use of the original packaging or suitable protective packaging is recommended.
- When moving the machine, use a sufficient number of people due to its weight.
- The machine must not be laid down or transported in an unstable position.

5.2 Assembling the Machine

The Nova 01 machine is shipped in a **folded position** for easier transport and handling. Before use, the machine must be properly set up and mechanically secured. The assembly procedure is as follows:

1. Place the machine on a flat, stable surface.
2. Carefully raise the upper section of the machine into an upright position (see Figure 5.1).
3. **Immediately after raising the upper section, the machine must be secured using the three mounting bolts, fastened from the underside of the machine with the bolt heads facing downward** (see Figure 5.2).
4. Check that all bolts are properly tightened before further handling or turning on the machine.
5. The machine must stand independently, without leaning against a wall or other objects, unless otherwise specified.
6. Before turning on the machine, check that all parts are properly assembled and secured.

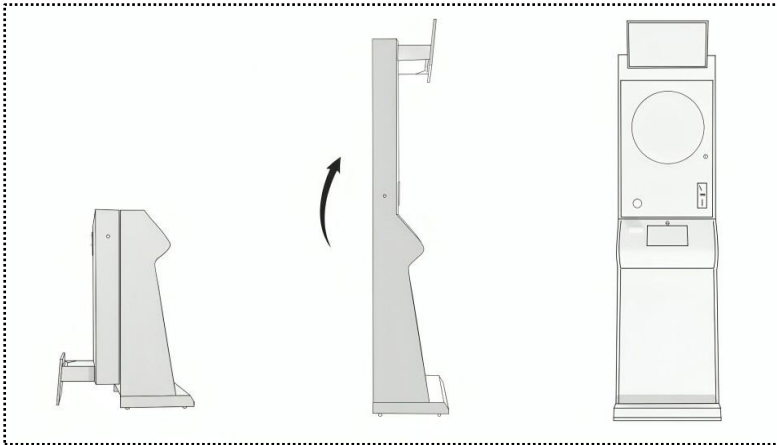


Figure 5.1: Machine position before and after raising the upper section

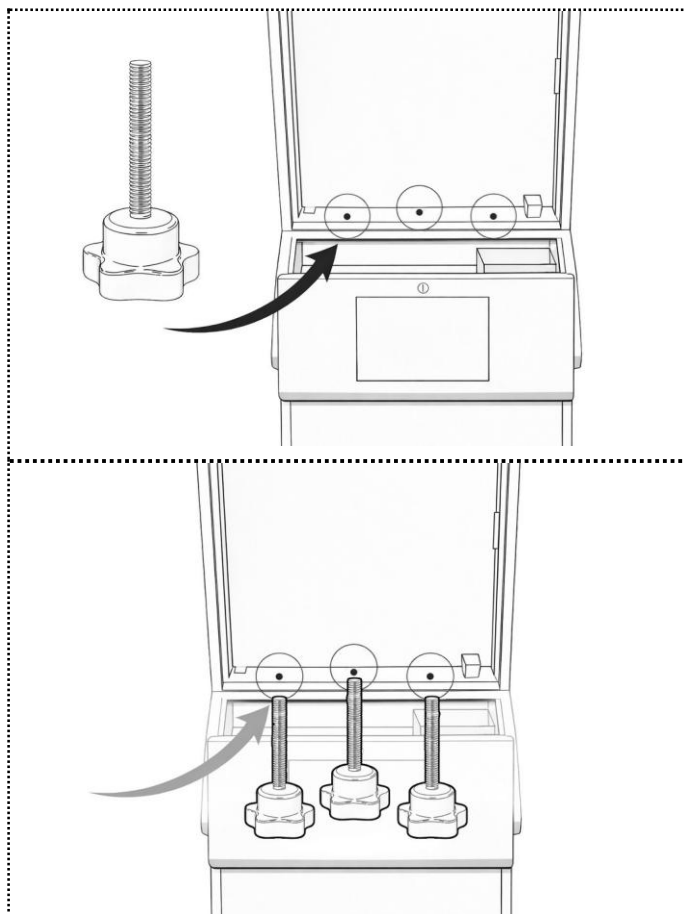


Figure 5.2: Position and direction for fastening the mounting bolts (fasten from the bottom upward)

⚠ IMPORTANT: The machine **must not be used or left standing upright** without first securing the upper section with the mounting bolts.

Ensure there is enough free space around the machine to allow safe play and unobstructed movement for users.

5.3 Bullseye Height

- The recommended bullseye height (Bull – the red center segment) is 173 cm from the floor, in accordance with current standards for electronic darts (see Figure 5.3).
- The height should be checked after final installation of the machine.
- The bullseye height can be raised or lowered by adjusting the leveling feet on the bottom of the machine.
- Incorrect target height can affect fair play, scoring, and the player experience.

- Periodic checks of the target height are recommended, especially after relocating the machine.

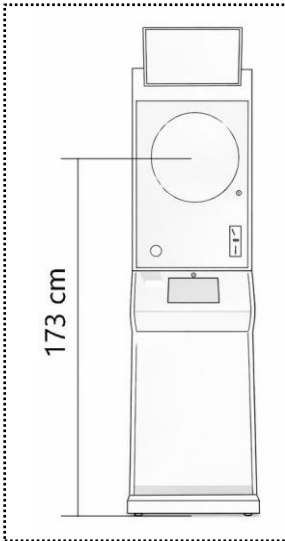


Figure 5.3: Bullseye height (Bull)

5.4 Adjusting Stability

- After installing the machine, its stability should be checked.
- The machine must stand firmly and level, without tilting or wobbling.
- If necessary, adjust the leveling feet so the machine is fully stable.
- Machine stability is important for accurate scoring and reliable sensor operation.
- Vibrations in the room (loud music, impacts, foot traffic) can affect machine operation and should be kept to a minimum.

5.5 Installing the Throw Line

The throw line is used to correctly position players relative to the target and is set according to official dimensions. Installation procedure:

1. On the lower cabinet of the machine, on the lower right side, there is a small slot marking the target plane.
2. The slot serves as a reference point for measuring the distance.
3. From the plane marked by the slot, measure a distance of 237 cm to the floor.
4. Mark this position on the floor at that distance.
5. Stick the throw line to the marked position.

Once properly installed, players should throw their darts from behind the throw line.

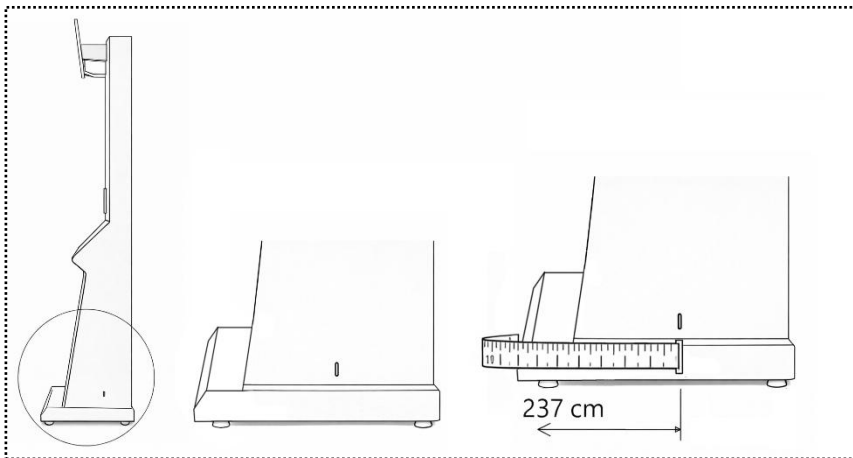


Figure 5.4: Installing the throw line

6 TURNING THE MACHINE ON AND OFF

Properly turning the machine on and off is important for stable system operation and the longevity of the electronic components.

6.1 Turning On the Machine

- Locate the power adapter in the lower cabinet of the machine, inside the cash compartment.
- Plug the adapter into a wall outlet.
- Connect the adapter to the 12V connector on the back of the machine (see Figure 6.1).
- Turn on the machine using the switch located on the left side of the upper cabinet (see Figure 6.2).
- Wait for the system to fully start up and show the home screen.

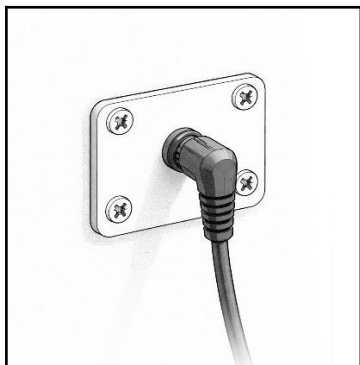


Figure 6.1: Connector



Figure 6.2: Switch

6.2 Properly Shutting Down the Machine

To properly shut down the machine, it is recommended to use the software shutdown option.

- To shut down the machine, use the touchscreen and select the **"Shut down"** option in the header (see Figure 7.5).
- Wait for the system to fully shut down.
- Alternatively, if needed, the machine can be turned off by holding the main switch pressed for **3 seconds** (see Figure 6.1).
- After shutting down, wait a few seconds before turning the machine back on.

7 USING THE TOUCHSCREEN

The touchscreen is used to control games, settings, and basic machine functions.

7.1 Home Menu

Once the system has finished starting up, the home menu is displayed. From the home menu you can:

- select "Solo Training" for individual practice
- select "Games" to display the list of games for up to eight players.
- change the interface language via the menu in the header
- turn off the machine using the "Shut down" **option in the header menu (three-dot icon)**
- view the available credit balance and the current time

Navigation is performed by tapping the corresponding icons on the screen.



Figure 7.1: Home screen

7.2 Solo Training

In this interface, the user can:

- select the "Start Game" option to launch the standard training mode
- before starting, enable "Advanced Mode," which allows aiming at specific target segments

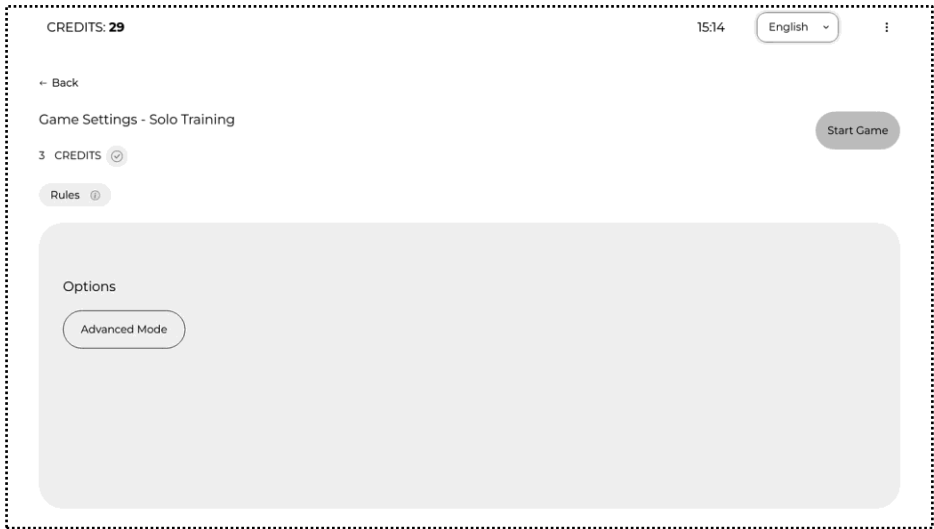


Figure 7.2: Solo Training

7.3 Game Selection

On the game selection screen, the user can:

- browse the list of available games
- add or remove players, with the number of players affecting the game price

Each game shows its price in credits.

If the user has enough credit, a checkmark is shown next to the game (✓), and if there is not enough credit, a cross (X) is displayed.

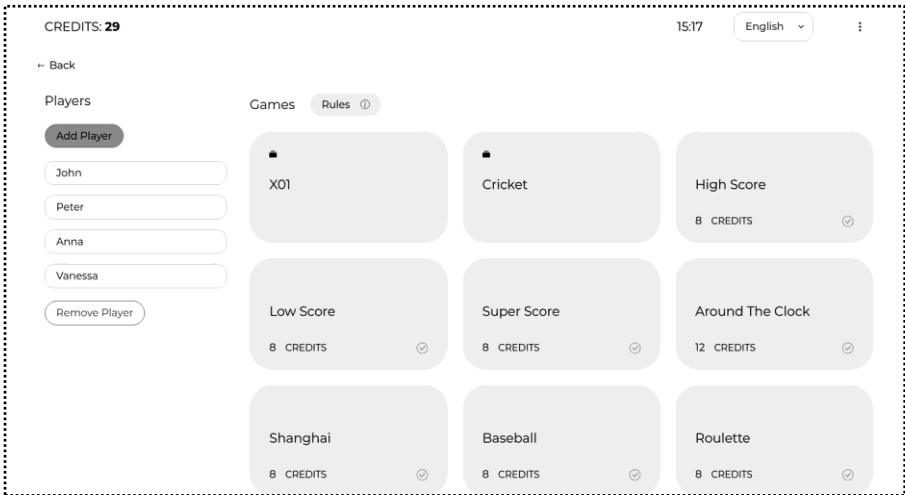


Figure 7.3 Game selection

7.4 Game Settings

After selecting a game, the user can customize the game settings:

- select the desired game options (e.g., *Equal*, *Double In*, and other available options)
- add or remove players
- change a player's name before the game starts (tapping the name opens the keyboard)
- tapping "Start Game" starts the game, and credits are automatically deducted

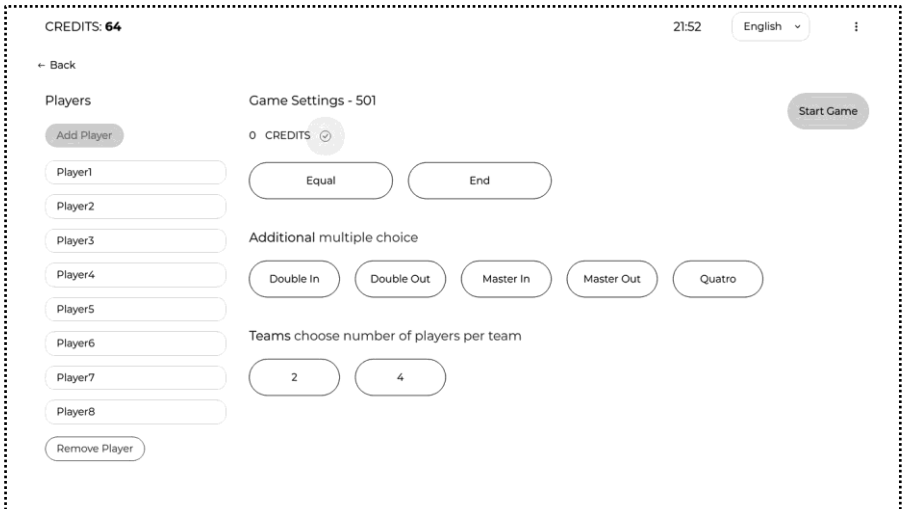


Figure 7.4: Game settings

7.5 Selection Interface Header

The header of the touchscreen, which is also available during a game, displays important information and options:

- the current credit balance is shown on the left
- a drop-down menu for changing the language is located on the right
- the three-dot icon provides access to the shutdown and restart options for the device



Figure 7.5 Selection interface header

8 GAMES AND PLAYER INTERFACE

During a game, the upper (LCD) display shows the player interface with information about the scores, the active player, and the progress of the game.

Game control is not possible during an active game; all actions related to starting, configuring, and selecting games are performed via the touchscreen (selection interface) before the game begins.

8.1 Starting a Game

Each game requires a certain number of credits, which are deducted from the current credit balance.

Once all game settings have been adjusted, the game starts by selecting the "Start Game" option.

All players may throw their darts when the green dart icon lights up on the touchscreen.



Figure 8.1: Player interface during an active game – green dart icon (throwing allowed)

8.2 Switching Players

The game automatically moves to the next player after three darts have been thrown.
The missed-throw sensor detects the player's presence and initiates the change when the player steps away.
Player order can be manually controlled using the round button on the machine, on the left side.

8.3 Dart Return and Ending a Game

If a throw needs to be corrected, the user can use the "RETURN DART" option in the bottom left corner of the screen.
To end the game, select the "QUIT" option in the bottom right corner of the screen, then confirm the choice.

8.4 Game Rules

During an active game, the rules for the specific game can be viewed at any time by selecting "GAME RULES" on the touchscreen.
A summary of the rules for all games on the machine is available in the game selection interface, as well as on the official website: www.beskardarts.com/games

8.5 Red Dart Icon – Meaning and Troubleshooting

The red dart icon is displayed on the touchscreen and indicates that throwing and scoring are disabled.
The red dart icon may appear, for example, if 3 darts have been thrown but a player change has not been detected.
While the red dart icon is active, no throws are scored.
Once the cause has been resolved (see section 13, TROUBLESHOOTING), the game automatically resumes normal scoring.



Figure 8.2: Player interface – red dart icon (throwing disabled)

8.6 Score Tracking

During the game, score tracking is simplified and automated.
Key game information is displayed on the upper (LCD) display, mounted at the top of the dart machine.

8.6.1 Current Scores

The large numbers in the center of the screen show the player's current score.

8.6.2 Dart Count

Icons on the left side of the player board show the number of darts thrown.
Each thrown dart is shown in gray or with a symbol, depending on the type of game.
The darts a player still has available to throw are shown in green.

8.6.3 Game Information

In addition to the score, the following is also displayed:

- the round number (e.g., ROUND 1/20)
- the average score per throw

8.6.4 Player Order

Player order is displayed in the interface alongside their current scores.
The active player is indicated with a highlighted display.

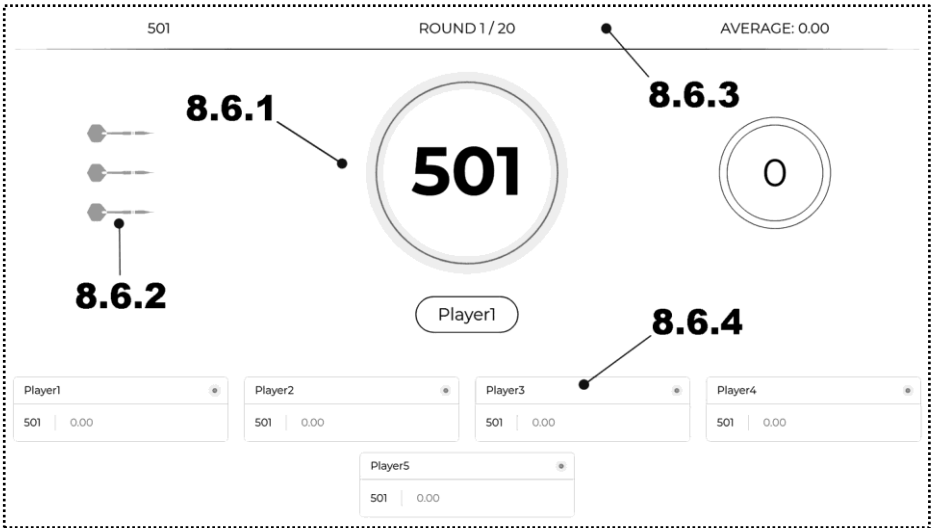


Figure 8.3: Player interface with labeled elements

8.6.5 Cricket Score Overview

For Cricket games, a special display is available that clearly indicates closed numbers and each player's status.

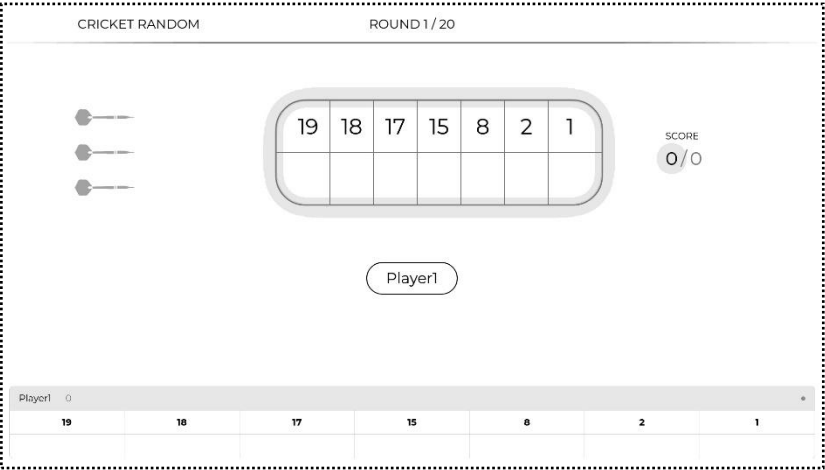


Figure 8.4: Cricket game interface

9 SOFTWARE SETTINGS

The software settings are accessed by activating **DIP switch 1** on the machine's motherboard. This opens the menu for configuring software parameters, allowing you to adjust the dart machine's functionality and behavior.



Figure 9.1: Software settings menu

9.1 Bookkeeping

Bookkeeping allows you to view and track the machine's financial data and is divided into main and

auxiliary bookkeeping.

9.1.1 Main Bookkeeping

Shows the total amount of money inserted into the machine since the main bookkeeping was last reset.

This data is used for long-term tracking of the machine's revenue and cannot be cleared without a deliberate reset.

9.1.2 Auxiliary Bookkeeping

Auxiliary bookkeeping allows you to view the amount of money inserted over a specific time period.

Auxiliary bookkeeping data can be reset as needed, for example for daily, weekly, or periodic totals.

9.2 Statistics

Statistics provide insight into how many times each game has been played on the machine.

The data is used to analyze machine usage and the popularity of individual games.

9.3 Game Prices

The "Game Prices" menu lets you set the price of each game in credits.

Each game can have a different price, depending on the machine owner's preferences.

Price changes take effect immediately after the settings are saved.

9.4 Credit Prices

This setting lets you define the relationship between the amount of money inserted and the number of credits awarded. This allows the machine's operation to be adapted to local market conditions and the currency in use.

9.5 Happy Hour

The *Happy Hour* option allows you to temporarily lower game prices during a predefined time period.

During Happy Hour, games are charged according to specially set prices.

Happy Hour is used for promotions and to increase player activity during specific hours.

9.6 Bull Value

This menu allows you to set the point value of the bullseye (Bull).

The value can be adjusted depending on the game rules or the machine owner's preferences.

9.7 Lights

The "Lights" menu allows you to control the machine's lighting elements.

The lights improve target visibility and also provide a visual effect during play.

9.7.1 Target Light

This option allows you to adjust the intensity of the target lighting.

The target light is located above the electronic target, positioned behind the upper (LCD) display, on the mount of the upper screen's support. The light is directed at the target to ensure the segments are illuminated during play.

9.7.2 Glowing Circle

This option allows you to adjust the intensity of the glowing numbers around the target.

The glowing circle serves as a visual aid during play, indicating active segments and game status.

9.7.3 Ambient Lighting

Allows you to adjust the decorative LED lighting at the base of the dart machine.

Ambient lighting has no effect on scoring or game functionality; it is used purely for visual effect and to enhance the machine's appearance in its surroundings.

9.8 Number of Rounds

This menu allows you to set the number of rounds per game.

The number-of-rounds setting determines how many rounds will be played before the game ends, depending on the selected game and its rules.

9.9 Video Ads

Adding and deleting the promotional content displayed on the machine.

Videos or images are loaded onto the machine's mini-computer via a USB drive and are currently supported only in MP4 format.

9.10 Wi-Fi Interface

Connecting and configuring the machine's Wi-Fi network is used solely for installing new software versions and for connecting with the manufacturer's technical support for diagnostics and troubleshooting.

The Wi-Fi connection does not affect gameplay and is not required for everyday use of the machine.

9.11 Clock

Setting for manually adjusting the machine's system time and date. Correct time settings are important for the proper functioning of certain software features and records.

9.12 Tournament Mode

Tournament mode is used for competitive play.

In this mode:

- visual and sound effects are disabled
- the game proceeds without interruption from additional animations

Tournament mode ensures focus on the game and adherence to competition conditions.

9.13 Sound

Setting for adjusting the volume of the machine's sound effects.

9.14 IR Sensor

The infrared sensor is used for automatically detecting player changes during a game.

This menu allows you to:

- turn the infrared sensor on or off

Note: The infrared sensor's sensitivity cannot be adjusted through the software menu.

Sensitivity is instead adjusted manually, using the potentiometer on the sensor itself, depending on the conditions in the room.

9.15 Software

This option displays the software version currently installed on the machine.

If a new version is available, an "Update" button is displayed, allowing you to download and install the new software.

If no new software version is available, a message is displayed indicating that the software is already up to date.

Note: The machine must be connected to a Wi-Fi network to update the software.

9.16 Reset Settings

The reset option allows you to restore the machine to its factory settings.
This function resets all user and software settings on the machine.

10 TESTING THE MACHINE

Pressing **DIP switch 2** on the motherboard opens the service menu for testing the machine.
In this menu, you can check that individual components and functions of the machine are working correctly.

Testing is carried out as follows:

- On the touchscreen, select the desired item from the test menu.
- After selecting an item, the corresponding test is activated.
- During the test, check the machine's response and the display on the screen.
- If the expected result is displayed correctly, the component is working properly.



Figure 10.1: Machine test menu

10.1 Testing the Target

Press a specific segment on the target and check on the touchscreen app whether the number or segment you pressed is shown. If it is shown, the segment is working properly.

10.2 Testing the Coin Acceptor

Insert a coin into the acceptor and check whether a coin-acceptance notification appears on the touchscreen. If it appears, the coin acceptor is working properly.

10.3 Testing the Bill Acceptor

Insert a bill into the acceptor and check whether a bill-acceptance notification appears on the touchscreen. If it appears, the bill acceptor is working properly.

10.4 Testing the Player-Change Button

Press the player-change button and check whether "OK" is displayed on the screen. If "OK" appears, the button is working properly.

10.5 Testing the TUP Sensor

Check the operation of the TUP sensor (missed-throw sensor) by causing vibrations or impacts near the machine, for example by intentionally hitting the black ring or making a loud/dull noise nearby. If "OK" appears on the screen, the sensor is working properly.

10.6 Testing the IR Sensor

Walk in front of the infrared sensor, located on the metal door below the touchscreen, and check whether "OK" is displayed on the screen. If "OK" appears, the IR sensor is working properly.

10.7 Testing the Glowing Circle

Press a number in the app (on the touchscreen) and check whether the same number lights up on the machine. Test the options for lighting up the circle of numbers in sequence around the target. If the lights activate as described, the glowing circle is working properly.

11 MAINTENANCE AND CLEANING

11.1 Regular Cleaning

Use a soft, dry cloth to remove dust. For stubborn stains, use a slightly dampened cloth with a neutral detergent. Always dry the surfaces after cleaning.

11.2 Display

Clean the displays with a soft cloth intended for electronics. Avoid glass cleaners and alcohol, as they can damage the display.

11.3 Target Segments

Regularly check the target segments and gently remove any jammed dart tips. Use a tip extractor or pliers to remove jammed dart tips. Periodically, every few weeks, open the target and remove any broken-off tips from the segments to ensure smooth gameplay and prevent jammed segments.

11.4 Sensors

Carefully clean the sensors with a dry cloth. Dust buildup can affect their proper functioning.

11.5 Mechanical Parts

Periodically check all mechanical parts and make sure they are clean and move freely.

11.6 Electrical Components

Disconnect the machine from power before cleaning.

11.7 Caution

Never immerse the machine or its parts in water or other liquids. Avoid abrasive cleaners and rough materials that could damage the surfaces.

11.8 Storage

When not in use, store the machine in a dry place, protected from direct sunlight. Covering the machine with a protective cover is recommended.

12 VIDEO ADS

12.1 Setting Up Ads

To display ads on the Nova 01 machine, follow these steps:

- Insert a USB drive into the corresponding USB port on the machine's mini-computer.
- Wait approximately **10 seconds** for the data on the USB drive to load properly.
- In the software settings, select the "**Video Ads**" option.
- Press "**Update Ads**" to add new video ads.
- Once the update is complete, the USB drive can be safely removed.
- To remove all existing ads, press "**Remove All**".

In that case, the system will revert to the default **BESKAR DARTS logo animation**.

12.2 Ad Requirements

For promotional materials to function correctly, they must meet the following technical requirements:

- **Format:** MP4
- **Resolution:** 1920x1080 (Full HD)

Note: Any number of ads can be set to rotate automatically, with no limit on how many. However, it is recommended to avoid too many ads, to prevent unnecessary system load and possible slight stuttering during playback.

For the best system stability, it is recommended to use **static images** instead of video clips; such images must be saved in **.mp4 format** to be compatible with the system.

13 TROUBLESHOOTING

This chapter describes the most common situations that may occur while using the BESKAR DARTS – Nova 01 machine, along with the recommended steps for resolving them. Before contacting technical support, it is recommended to check the items listed below.

13.1 Jammed Target Segments

If you notice incorrect scoring, or that a particular target segment does not return to its original position:

- Inspect the target and remove any remaining pieces of broken dart tips.
- Check that no segment is physically jammed.
- Gently press the suspected segment to check whether it springs back freely.
- Regularly cleaning the target prevents segments from jamming and ensures accurate scoring.

 **Note:** Do not use force or sharp objects to free the segments.

13.2 Sensor Sensitivity

The Nova 01 machine uses two different sensors, each with a different function and adjustment method:

- **Shock sensor** (missed-throw sensor) – located on the inside of the upper cabinet door.
- **IR sensor** (infrared sensor for player detection) – located on the metal door of the lower cabinet, below the touchscreen.

If you notice that the sensors are not responding properly, first check:

- whether the sensors are enabled in the machine settings

- whether there are any obstructions that could interfere with detection
- the cleanliness of the machine's interior and the absence of loose parts that could cause vibration
- the level of noise and vibration in the room (loud music, impacts, floor vibrations)

If necessary, manually adjust the sensor sensitivity using the potentiometer on the sensor itself, depending on the conditions in the room.

Detailed adjustment of each sensor is described below:

- 13.2.1 Adjusting the Infrared (IR) Sensor
- 13.2.2 Adjusting the Shock Sensor

Note: Every venue has different conditions, so the machine owner may independently adjust sensor sensitivity to match the actual conditions of use.

13.2.1 Adjusting the Infrared (IR) Sensor

- **Sensor location:** The infrared (IR) sensor is located on the metal door of the lower cabinet, just below the touchscreen. To access the sensor, the lower door of the machine must be opened (see Figure 13.1).
- **Adjustment overview:** The IR sensor uses two potentiometers for fine-tuning its operation. They are located on the sensor board and have orange adjustment slots.
- **Potentiometer A:** Determines the **distance** at which the sensor registers a player's presence. For most standard conditions, it is recommended to set it to the "**12 o'clock**" position (mark 105, with the flat side of the slot facing up).
- **Potentiometer B:** Determines the sensor's **sensitivity** to movement and presence. For most standard conditions, it is recommended to set it to the "**8 o'clock**" position.

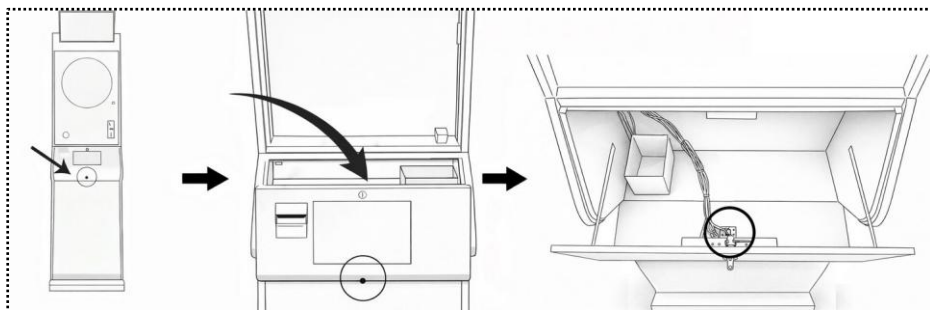


Figure 13.1: IR sensor position

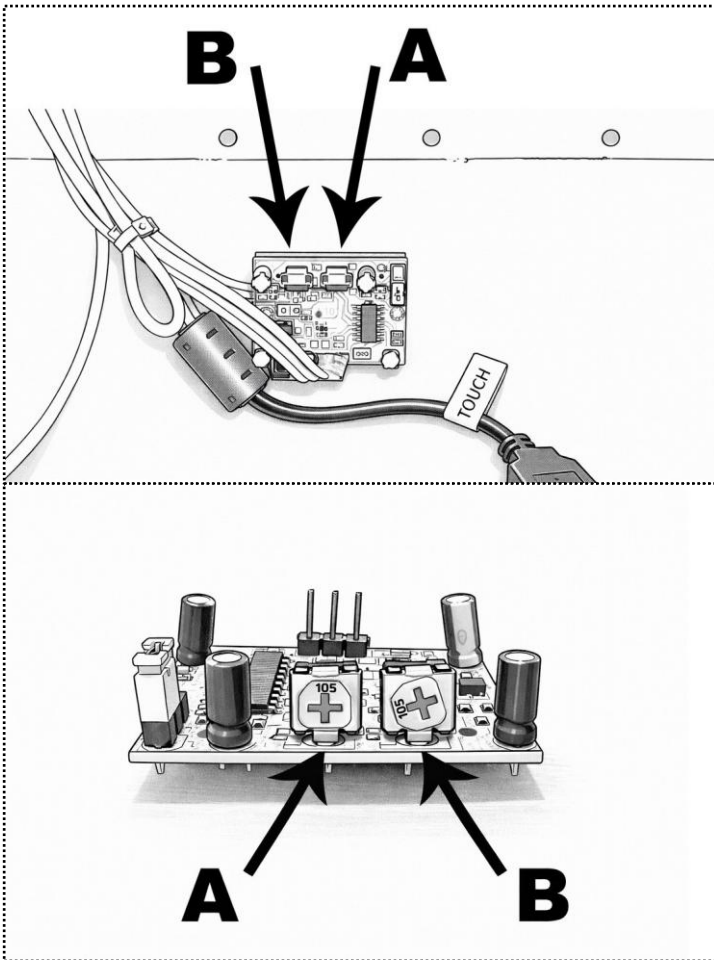


Figure 13.2: IR sensor – position of potentiometers A and B

13.2.2 Adjusting the Shock Sensor

- **Sensor location:** The shock sensor (missed-throw sensor) is located on the inside of the upper cabinet door, near the motherboard (CPU). To access the sensor, the upper door of the machine must be opened (see Figure 13.3).
- **Adjustment overview:** The shock sensor detects vibrations and impacts associated with throwing darts. The sensor has two silver-colored potentiometers (trim screws) for adjusting detection sensitivity (see Figure 13.4).
- If the sensor is **not sensitive enough**: gently turn the potentiometers clockwise.

- If the sensor is **too sensitive (false triggers)**: gently turn the potentiometers counterclockwise.
- For most standard conditions, it is recommended to initially set both potentiometers to approximately the **"5 o'clock"** position.
- Adjustment is done using a small Phillips or flat-head screwdriver.

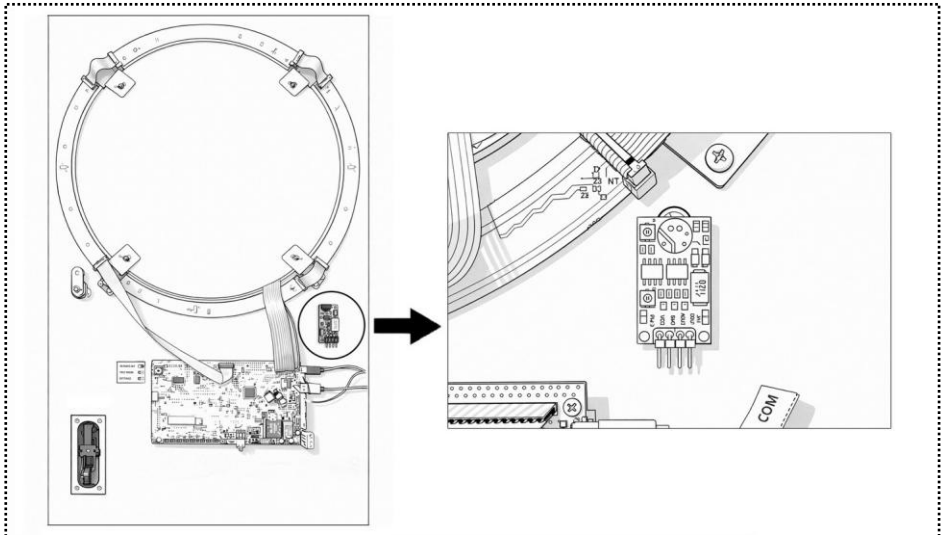


Figure 13.3: Shock sensor position

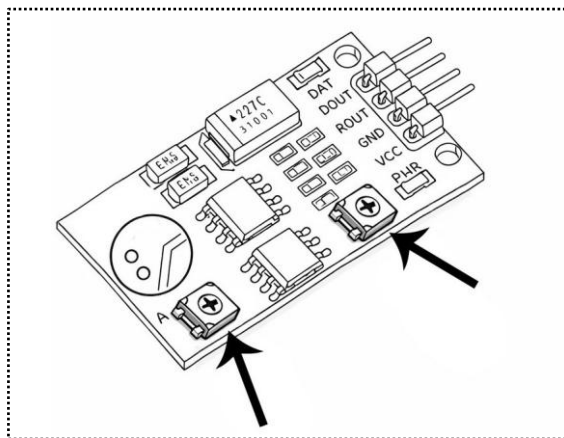


Figure 13.4: Shock sensor – location of the adjustment potentiometers

13.3 Managing Cable Connections

If, after connecting or disconnecting a cable, communication is completely lost — that is, if the LED indicator on the motherboard does not blink — the system needs to be restarted.

Proceed as follows:

1. With the machine turned on, press the reset button in the middle of the motherboard, to the left of the microcontroller (see Figure 13.5).
2. Then restart the app from the touchscreen header (Restart).
3. Check whether communication has been re-established — the LED indicator on the motherboard should be blinking.

If communication is still not established, it is recommended to check the cable connections or contact technical support. Check the cable connections as follows:

1. Turn off the machine via the touchscreen or the main switch.
2. Check and reconnect all relevant cable connections inside the machine.
3. Turn the machine back on using the main switch.

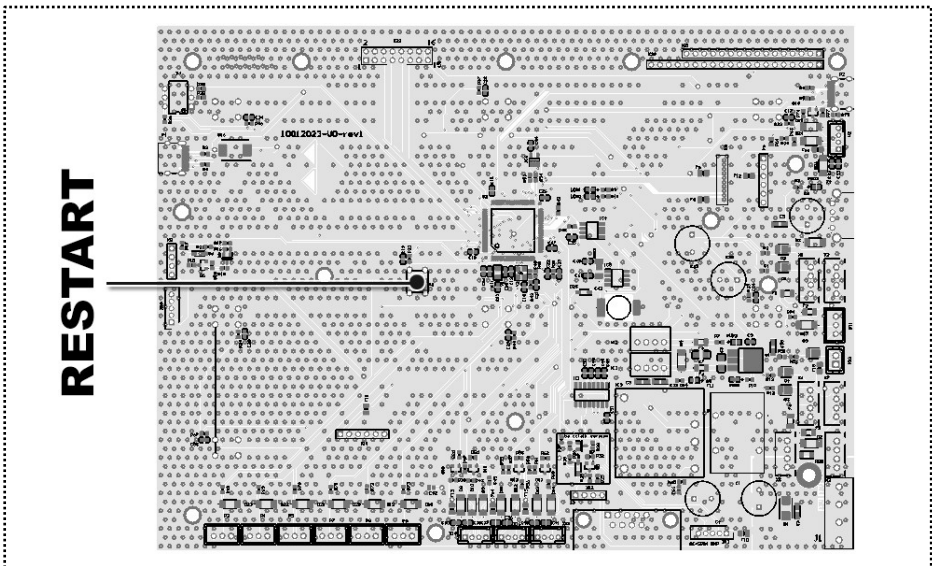


Figure 13.5: Position of the reset button on the motherboard

13.4 Technical Support

If the problem cannot be resolved using the steps above, please contact the manufacturer's technical support. Before contacting support, note down the following information:

- a brief description of the issue
- when and how the issue occurs
- any error messages or notifications shown on the screen
- a photo or short video of the issue, if possible

Technical support contact:

- support@beskardarts.com
- +385 91 614 5718

Our team will provide further instructions or, if available, remote technical support.