

Instructions for use





Version 2.4 'Demo'



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Intended Use: This software is intended to be used for neurocognitive (re)training, to improve consumption behaviors.

Indication for use: This intervention software is suitable whenever reducing the motivational value of cues triggering consumption is beneficial.

Warning: Potential side effects are consistent with those associated with playing mobile video games, including musculoskeletal problems or fatigue. We therefore recommend the following precautions: avoid using the software if you are tired or lack sleep; try to use the software in a room with sufficient light, with an appropriate distance to the screen and in a good position; plan to take 10 to 15-minute breaks every hour.



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We are at your service to help you.

Neuria SàRL is available for any questions regarding the use of 'The Diner' and to provide technical assistance at the following email address: contact@neuria.ch

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Neuria SàRL reserves the right to modify its products and services at any time to include the latest technological developments.

This user manual is subject to change without notice.

Labels and symbols



Manufacturer



Consult the instructions for use



Warning: please pay attention to the following details



Precautions for use

Please contact your physician before starting any procedure with The Diner, especially if you are a minor, suffer from any medical condition, or for any medical questions related or not to the use of The Diner. The use of The Diner is not a substitute for planned or ongoing medical treatment.

Avoid playing if you are tired or not sleeping. Make sure you play in a well-lit room by moderating the brightness and distance from your screen. Take short breaks (10 - 15 minutes) at least every hour.

If performing "The Diner" application tasks triggers health problems (e.g., impaired vision, muscle contractures, eye or joint discomfort or pain), or side effects (e.g., frustration, headaches, emotional reactions, nausea, or aggression), stop the procedure and contact your treating physician before resuming the procedure.

Please follow all of the manufacturer's instructions for the safe use of your device. These instructions may include proper volume control, proper charging of the battery, and not using the device if it is damaged. Contact the manufacturer of the device if you have any questions about it.

The Diner is recommended as an adjunctive intervention to therapeutic programs that may include clinician-directed therapy, medication, and/or educational programs.

In case of a medical emergency, please call 144 in Switzerland.

Indication for use

This software is indicated whenever reducing the motivational value of cues triggering consumption is beneficial.

Contraindications

The use of this software is not recommended for anyone who is underweight (BMI < 18.5) suffering from an eating disorder, pregnant, or for children under 7 years of age.

Product description

The Diner is a software for cognitive remediation through a digital intervention consisting of video games specifically designed to modulate the evaluation of environmental cues. These video games include two motor control tasks for responses to target cues.

The Diner is based on mechanisms of action and technologies which allow to:

- modulate the evaluation of pictures (cues) selected to be relevant to the player.
- see his progress on the tasks included in the intervention and in relation to others
- benefit from remote progress monitoring by the person in charge of the intervention
- maximize engagement in the tasks

To complete one day of intervention, a minimum of 10 minutes must be played on each task, so 20 minutes per day. It is recommended to play 10 days over four weeks to observe the desired effect.

Installation

The Diner is a software for mobile devices with touch screen (smartphone, tablet) running on the Android system.

Minimum requirements for optimal use of the game:

- Android system version 5.1, Lollipop, API Level 22.
- Memory space of 200 Mb.

Unless you have been provided with a device with the software pre-installed, the installation of the application is done manually by following these steps:

- Download the game The Diner Demo from the Android store.
- In the game, use the given username and password.

Tips for use

In order to get the most out of the software, please follow these few recommendations:

- Make sure your device is sufficiently charged before use
- Make sure that the audio system is working properly and that the volume is set to an appropriate level. Ideally, do not mute the sound completely during games. The sound effects are there to make it easier for you to identify the response patterns.
- To avoid discomfort, find a comfortable place to sit, such as a table or couch with good back and arm support.
- Make sure that your device is regularly connected to the internet so that the application can transmit its usage data (see Data Collection section).
- Choose a quiet place to train to enhance the effect of the intervention. For example, you could turn off your phone and television. For the best experience, you may want to turn off notifications or switch to "Do Not Disturb" mode. For more details, please refer to your system instructions.
- Perform the procedure at a time of day when you are well. The procedure may require some effort to concentrate, and may be frustrating at times.
- Do not start a game between 11:30 pm and midnight. The application resets the progress gauges at midnight (see section Task selection menu). Also, in order to avoid disturbing the quality of sleep, it is recommended not to play just before bedtime.

Special terms

- *Bonus*: consumables that allow to add or modify the mechanics of a game.
- *Diner Coins*: game currency.
- *Shop*: menu where you can exchange Diner Coins for bonuses.

Introduction to The Diner

Principle of the software

The software is divided into two main tasks (or 'games'): 'Service' and 'Takeaway'. In each task, you will have to respond to pictures according to instructions given at the beginning of the game.

The overall goal of both tasks is to 'survive' as long as possible by answering the pictures quickly and accurately. With the accumulation of correct answers, the score and the difficulty increase: the speed of response required will be higher and higher. After 5 wrong answers or 5 "Too late", the game ends and the score is converted into "Diner Coins", the currency of the game.

The Diner Coins accumulated during the game allow you to buy bonuses in the store (see section Shop and bonuses). The bonuses allow you to increase your score during the game.

Data collection

During the procedure, if your device is connected to the internet, the software sends data about your practice and performance to a secure server.

This data includes:

- Date, time and game time.
- Actions taken in game: type and number of answers, answer times and bonus usage.
- Scores, which are used to update the overall score table (see Score Table section).

The data sent is associated with a unique code displayed in the contact section of the main menu. This code allows your data to be sent anonymously. Only people who know the associations between your name and the code can link the data sent to the server to your identity. Such a person could be, for example, the clinician who proposed the intervention to you.

The data synchronization takes place at the beginning of a new game.

The application can be used offline, but no data will be sent to our servers until a game is performed connected to the internet. As a result, the global score table will not update.

How to play

Main menu

The main menu screen gives access to:

- (1) The task selection menu (see corresponding section).
- (2) The global score table (see section Score table).
- (3) The software settings (music and sound effects volume).
- (4) Information about the development team, and to the contacts and the unique code of the application, in case of questions or problems.
- (5) Close the software.



Pictures rating

After pressing the "Play" button for the first time, you will be asked to evaluate the palatability or other characteristics of several pictures. This questionnaire allows you to customize the intervention to your preferences. Only the best rated pictures will be kept for the rest of the intervention.

Answer the question for each image honestly and intuitively by pressing the scale (1) at the bottom of the screen. Please complete this questionnaire away from meals or according to other instructions given to you by the person who proposed the intervention, so that your state at the time of the evaluation influences your answers in a controlled way. Once completed, you will automatically be taken to the task selection menu.



Task selection menu

This menu allows you to choose between the task: "Service" or "Takeaway". Click on the area (1) or (2) to start a game.

The buttons at the top of the screen allow you to either return to the main menu (3) or to access the "Shop" (4) to buy bonuses (4) (see section Shop and bonuses).

In the areas (1) and (2) the following elements in red inform about the progress of the intervention:

(5) The progress gauge informs you about the completion rate of the daily goal. After 10 minutes of playing a task, the counter is incremented, indicating the successful completion of the daily goal. The gauges reset to zero at midnight.

(6) The best score obtained.

(7) The accumulated Diner Coins.



Pre-game screens

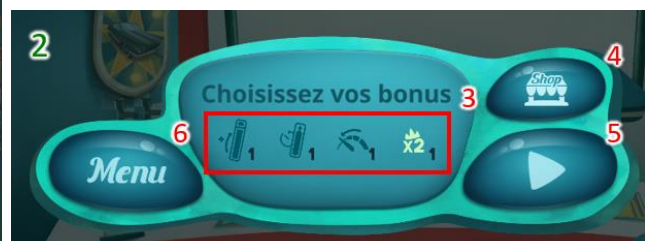
After selecting the task, an instruction screen (1) is displayed followed by a menu to activate the bonuses for the game (2):

(3) Allows you to activate (shine) or deactivate (mate) the bonuses for the game. The number of bonuses acquired is displayed below each icon.

(4) Accesses the "Shop" to buy bonuses for the selected task (Shop and bonus section).

(5) Starts the game with the selected bonuses.

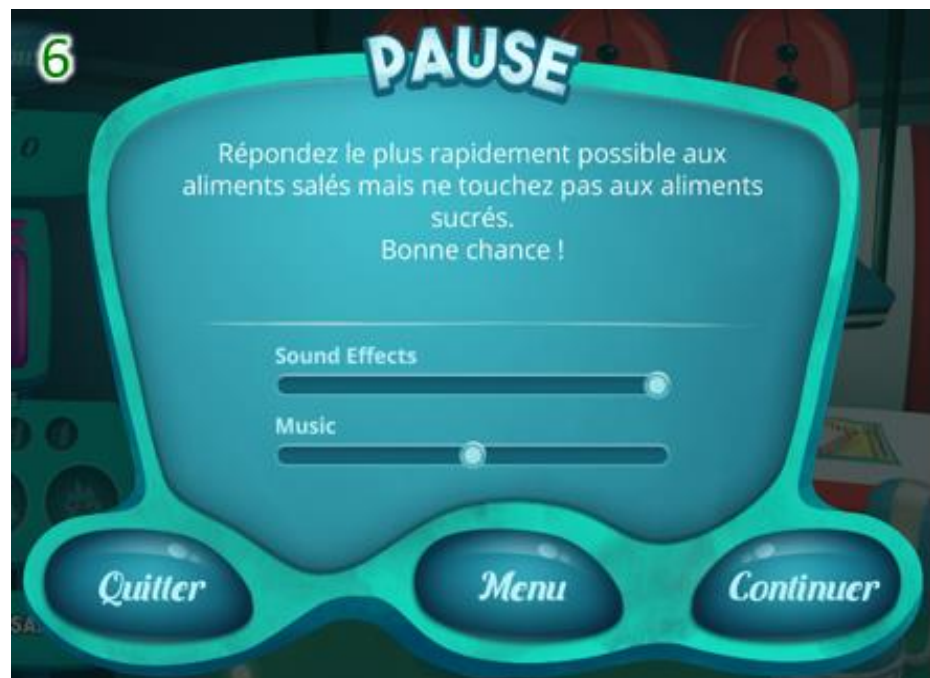
(6) Goes back to the main menu.



Interface

Both tasks have the following interface:

- (1) **Difficulty level**: the difficulty increases in steps with the correct answers. The more the difficulty increases, the shorter the required response time and the higher the score.
- (2) **Score** : turns into 'Diner Coins' at the end of the game
- (3) and (4) **Life Gauges**: decrease with each error (incorrect answer) or each 'Too late' (answer too slow). If one of the two gauges runs out, the game ends. If the accuracy gauge (3) runs out, you must be more accurate. If the speed gauge (4) runs out, you have to be faster.
- (5) **Bonuses** : display of the bonuses activated or not for the game. In the small upper part are the bonuses that are passively active during the whole game. In large at the bottom are the bonuses that can be activated during the game (see section Shop and bonuses).
- (6) **Pause**: allows you to pause the game, change settings, display instructions and return to the main menu or quit the application.



Task « Service »

In this task, you have to bring the images that fall on the counter (1) to the bar (2) as quickly as possible, but **only** if they are circled in green. Be careful not to touch the pictures in red!

If an image is dropped too soon, the word "LOW" will be displayed and the accuracy gauge will drop one notch. In this case, take care to make constant movement in contact with the touch screen. If the image is selected too slowly, the word "Too late" appears and the speed gauge drops one notch. As the difficulty increases, the reaction time threshold decreases.



Task « Takeaway »

In this task, boxes will open revealing pictures (1). You have to press on the images only after a **green circle** appears accompanied by a bell sound.

If the answer is given before the green circle appears, the error gauge is emptied by one notch. If the answer is given after the image disappears, the word "Too late" appears and the speed gauge drops one notch. As the difficulty increases, the green circle appears closer and closer to the end of the image's life, making the response window shorter.



Game over screen

After one of the two gauges has emptied, the game ends and the performance summary is displayed.

This screen contains:

- (1) The score of the game.
- (2) The Diner Coins converted from the score.
- (3) The increase in the daily goal completion gauge. After 10 minutes of cumulative play in the same day, the gauge fills up and a "+1" is displayed to indicate that the counter is incrementing (see section Task Selection Menu).
- (4) Comparison of the score with other games. In this example it is the best score of the two games played.
- (5) The maximum difficulty level reached in this game.
- (6) Starts a new game.



Global score table

The best score achieved per game is compared to other users in the "Scores" section from the main menu


- (1). It contains:
- (2) The ranking of the corresponding score.
- (3) The best score achieved by the user.
- (4) The level that has been reached during the corresponding score.
- (5) Selects the task to compare.
- (6) Raises the table to the best scores.
- (7) Centers the table on the user's line.



Shop and bonus

Bonuses for modifying task mechanics can be redeemed with Diner Coins from the Shop. This menu can be accessed from the task selection menu or from the pre-game screen (see corresponding sections). Bonuses are activated before each game (see Pre-Game Screen section).

The Shop contains:

- (1) The purchase table. Each column corresponds to a task and each row corresponds to a type of bonus. Bonuses are specific to each task. To get the bonus of a task, you have to exchange Diner Coins obtained in the other task with the displayed price.
- (2) The summary of the Diner Coins obtained in the task « Service » and « Takeaway ».
- (3) Description of bonuses. Pressing the  displays the description of the corresponding bonus.



Four different bonuses can be purchased:



Life+: Increases both life gauges by two additional levels. Active for the whole game.



Regeneration: Regenerates both life gauges by one level after a certain time. Active all game.



Slow Down: Decreases the difficulty by two levels. Can be activated once during the game.



Score x2: Double the score obtained during a certain time. Can be activated once in a game.

Contact

In case of problems or questions, you can contact: contact@neuria.ch

This information can also be found in the "Contact" section of the software's main menu.

Technical specifications

Product reference number

2.4 'Diner Demo'

Minimum operating system requirement

Android version 5.1, Lollipop, API Level 22

Minimum hardware requirements

CPU

ARMv7 with Neon Support (32-bit) or ARM64

Graphics API

OpenGL ES 2.0+, OpenGL ES 3.0+, Vulkan

Additional requirements

1GB+ RAM.

Supported hardware devices must meet or exceed Google's Android Compatibility Definition (Version 9.0).

Hardware must natively be running Android OS. Android within a Container or Emulator is not supported.

For Development: Android SDK (9/API 28), Android NDK (r19) and OpenJDK, which are installed by default with Unity Hub

Mobile Device Security

We recommend that you secure your mobile device with a password to reduce the risk of unauthorized access.

The mobile device should automatically lock after a period of inactivity.

Avoid using unsafe WiFi networks.

The system on your mobile device should be updated to the latest version available.