Mental Games

Level I und II

Peak-Performance Multimedia
Psychointeractive Software



Reference Guide
and
User's Manual

NOTICE

Mental Games and ThoughtStream are intended for use as tools for enhancing consciousness, promoting relaxation and personal growth. They are not intended for use as medical diagnostic or therapeutic devices, and no medical claims of any sort are made for them, either singly or in combination.

Version 2.6.1

Hardware requirements

Thought Stream
Pentium 200 MHz or better
64 MB RAM or more
SoundBlaster compatible soundcard
SVGA monitor, true color
mouse
free serial port
120 MB of free space on hard disk

Best performance on Windows 95/98, ME or NT4.0 / Windows 2000

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For more information look at

Our sites presenting CDs and AudioStrobe decoders:
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About ThoughtStream:
www.syneticsystems.com
Biofeedback devices:
www.psychointeractive.com
High-End software developments for ThoughtStream:
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Custom Games

There is a reserved place in Mental Games for new Natgames modules as well for custom made modules. If you have an idea which you want to incorporate into Mental Games, please contact AudioStrobe directly at info@audiostrobe.com May be we can help you in realizing your ideas by developing a new module, for yourself or to share it with other users of Mental Games.

You just enter the Custom Games by clicking the "Custom" button in the Level 2 entry. A list of available modules will appear. In case you have more than 10 modules already saved to in the "Custom" area you may scroll to the next 10 by clicking the arrows.
Select the training module you want and follow the training instructions.

In the "**Custom**" area are already several new modules with the distributed version of Mental Games. One of them is "Balance", where you can train emotional stability.

Playing with different settings

Try different sensitivity and time scale options to find your own optimal settings for each state of the training.

Try to speed up the games or increase the sensitivity of the biofeedback loop after some experience. You will find out that your attention, ability to relax will change from day to day and playing the Mental Games will let you develop—both consciously and unconsciously—new behaviors and strategies, which you suddenly find yourself applying to everyday situations. Think on your ability to relax and concentrate during such stressful situations like doing exams, or becoming totally immersed "in the moment" in sport activities and having the ability to relax and regenerate after them at will.

A very pleasant voyage to you!

your Mental Games team



Introduction

Congratulations! You now own a powerful new tool for personal growth. Mental Games includes a series of biofeedback-enabled training programs, specially designed to help you achieve the following goals:

- Quickly shift from relaxed to highly focused states of mind/body integration and back again.
- "Fine-tune" your ability to pay close attention.
- Stay calm in difficult/stressful situations.
- Achieve sustained states of mental clarity.

Plus much more!

The Mental Games Concept

In modern society, we are exposed to many forms of stress. It's often difficult to avoid the sources of stress, but you can learn to react to it in a more efficient or even in a more intelligent way. Learning these new strategies for stress management will enable you to unlock the full potential of your inner energy resources.

The Mental Games multimedia software analyzes the tiny changes in your skin resistance values (GSR) sent by the ThoughtStreamtm biofeedback system to your personal computer.

Training modules of Mental Games "feel" how much you are focused and relaxed and will change their response according to your mental state.

Using this combination of multimedia technology and biofeedback, you enter a new dimension of personal training. Playing Mental Games will help you in changing your habits regarding learning, concentration and relaxation. You may soon notice that you are more relaxed in your everyday life, being more present and focused without "burning out." You will learn different strategies of interaction—your own strategies—preserving and developing your valuable inner resources.

We plan to produce seven "levels" of Mental Games, together with a range of helpful add-ons. Currently we are working on a personal database, to allow you to analyze your progress over time in much more detail; integration into an online personal training system; and sports performance training. We also are at work on a multichannel biofeedback system to further enhance your Mental Games experience.

There are two levels available in this version of Mental Games. Level 1, "Psychophysiological" and Level 2, "Sensomotoric".

A hint about mouse clicks:
Save your energy and use a single right mouse click in the software unless otherwise specified.

And please, do not send us emails that you have discovered a bug in the module because you are sure there were (or were not) exactly five same objects and you lost points. We have tested this module many times because we were convinced it was not always right, but we have found out that it was just our human disability to count the objects correctly!

"Netgames"
If you have internet access on your computer and you are a registered user you can use "NetGames" for loading new game modules into the "Custom" area.
Once loaded, the game is saved to the hard disk and can be accessed any time in the future.

When you enter the Netgames you will be asked to select the preview mode.
If you choose "Load", a local preview will be started from the hard disk.
You are welcomed to update the Netgames preview from the internet from time to time to check if any new modules or information is available. Just select "Update". Then the internet connection will be established and after a successful download the Netgames preview will be started and is available as "local" version.

When you enter the Netgames you can scroll with the arrows from module to module. The program recognizes the status of the modules. When a module is already loaded it's picture will fade in and out revealing "click to enter" button.
If the module is not loaded then click on "load" button. The download will start.
In case of any network problems you may press "abort" to stop the downloading process.

The internet connection is not being closed automatically as some other application may use it. Close the connection from the shortcut menu or any other way. See the manual of your operating system in case of questions.
The "on the disk" samples of the NetGames are simple but very effective strategy games: in mental and abstract thinking as well.

“Insects” and “Drops”
These two modules work with so called positive and negative feedback loops. In each game you will be asked to catch some moving objects.

In **Insects** these are ants, which have to be changed first into “ladybugs”; clicking on a ladybug causes it to “fly”. This game is especially helpful for increasing your spatial abilities.

With **Drops** you catch as many falling drops as you can with your “bucket.” This one integrates eye/hand coordination with perception of vertical movement, and may be especially well suited for use with children who have difficulty concentrating.

Use the difficulty-select buttons on the bottom left of the screen to toggle between three modes: normal, positive and negative.

When you choose the positive loop the speed of the objects will increase when you get stressed, or decrease when you concentrate and relax. The training supports you in finding your own optimal mental strategy. The negative loop, where the objects will accelerate when you are focused and relaxed is for more advanced users, who want to be challenged while in an optimal state of mind: “When I am focused and relaxed give me more!”

“Reaction”
There are sixteen slots where one of four objects can appear. The goal is to click on the object, which is displayed exactly five times on the screen. If you are right you get extra credit points and the rainbow bar will grow. If your choice is a mistake or you wait too long and there are exactly five same objects, you loose some points. If you are sure there are not five same objects you may click on the bar to toggle next run.

If you choose the positive loop the objects will toggle in shorter intervals when you get stressed.

The game is over when the rainbow bar disappears – you lost – or when it will fill the bar – you won. The score will include the relaxation quotient, time, and the number of false clicks.

This training game will exercise your ability to react instantaneously but still in a relaxed state.

Software Installation

1. Insert the CD into your CD-ROM drive. In case you have "auto-start” activated the installation program will launch up. Otherwise start "install.exe” on the CD.

2. Please follow the instruction of the installer.

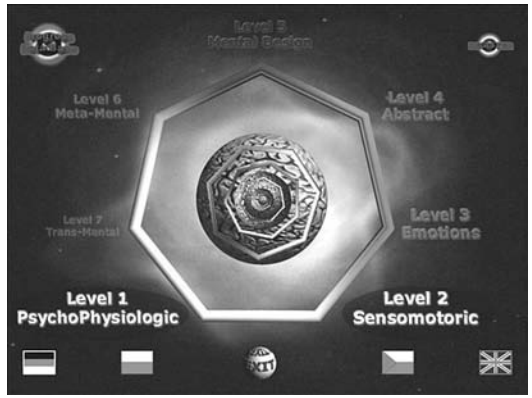
3. After the installation there should appear MentalGames icon on your desktop.

4. For best performance please use 800 x 600 pixel resolution at 24 or 32 Bit color (True Color) for your display.

5. Connect the ThoughtStream with the serial port of your computer with the delivered connection cable.

6. Start the program. The registration dialog of the Mental Games will appear.

7. In case you have your registration number already, please type your name and the registration number in the appropriate fields exactly as received from AudioStrobe. Please note that the number is unique to your name and case sensitive.



The main “Entry” screen will appear. Select the language for help menus you want.

8. Put on the sensors on your fingers and switch on the ThougtStream.
   Choose "Level 1”. Here you can make the basic settings like selecting your serial port number and sound volume. Also further help menus will be available. You can save, load, plot and print the data of the last session of all levels.
   For best results start with Level 1 training and then switch to Level 2.

Explore the games and find your best setting.

Using the personal Progress Database



In order to monitor your progress over a longer period of time you have a simple but very effective database at your disposal. Every time a session is stopped the current statistics values are stored automatically to the database.

In case, for whatever reason, you want to delete **the last entry** you need just to click on "No Progress Entry" symbol:



You can access the database through the "Entry" main screen.

Select one out of 4 different viewing modes:

Max Stress
Maximum stress in % relative to the start value.
While training relaxation try to avoid high peaks in stress.

Max Relax
Maximum relaxation in % relative to the start value.
Try to reach values of more than 100% in a session. Some people can manage to change their relative GSR value more than 300%, but values of 50% are fine at the beginning.

Average Relax
The average of the whole session in % relative to the start value.

Average GSR
The average GSR value of the whole session in kOhm.
Here you can read the absolute values, which helps you to keep track of changes in your psychophysiology.

You can clear all the data entries in your personal database clicking on:



There are several groups of modules in Level II:

"Digits" and "Focus"
These are ideal for improving concentration and learning to focus on the "big picture" while maintaining attention for individual details. They also help you learn how to perceive meaningful/important details that are embedded in "clutter": that is, increase your visual "signal to noise" ratio.

In "**Digits**" you have to click on the numbers in sequence (1,2…), which are randomly distributed each time you play. You work to "beat the clock" while staying calm.

In "**Focus**" you learn to train your attention and reaction times as well as memory. This module was specially designed for sport like activities, where you have to be ready for any sudden reaction and action. The most difficult version of this may also improve your peripheral vision.

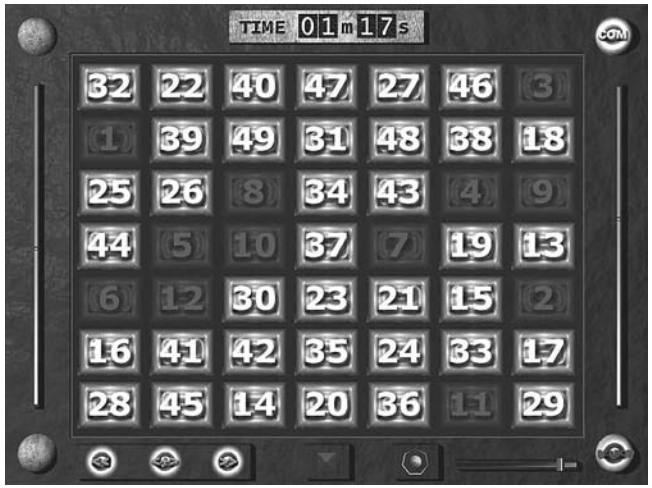
"Mandala" and "Music Plot"
These are more "passive" modules.

Mandala
You can mentally control direction and speed of rotation of several objects. You can also set a background sound loop to support you in reaching a desired mental state. You can choose from relaxing, exciting, exotic or even trance-like sounds simply by clicking on the little colored spheres on either side of the display. Note also the sensitivity ("amplify") and "time scale" settings at the top of the screen. In "Music Plot" the time scale may be adjusted from between five and sixty minutes; this is how long the session runs.

Mandala is recommended for meditation, energizing or trance-induction.

Music Plot
With these module you can learn to control music with your thoughts and feelings while watching a real-time display onscreen. This module is ideal for long, deep relaxation sessions, for learning just how far your GSR reading can drop while relaxing, and for general "chill out" applications. You can also use it with light/sound machines as a means to verify the effect the session is having on your physiology. In this case, try plugging your headphones into your PC's headphone output.

Level 2



Level 2, the “Sensomotoric”, consists of a number of independent modules for active training of your responses. While Level I was intended to allow you to train your GSR either up or down or both, Level II is intended to develop more narrowly focused skill sets, with your GSR being monitored and displayed on screen in real time and logged to a data file. You can use most of the modules with or without ThoughtStream.

This series of modules have been structured as games of skill. Each one may be played at three or more levels of difficulty.

The goal in playing these games is to achieve the highest score while in an optimal mental state. The total score includes both your sensomotoric (eye/hand/reflex) and mental skills. Each module has several versions differing in difficulty or some biofeedback options.

Every module incorporates the same basic interface, as shown in Figure 2. On the left and right sides of the screen is a “real-time” display of your GSR. The indicator is higher when you are feeling more anxious or stressed, and lower when you are more relaxed. Typically you will want the indicators to remain fixed or move lower during the game.

Use the three arrow buttons on the bottom left of the screen to select a level of difficulty for the game, and press the large arrow button in the bottom-center of the screen to begin your training.

Changing the User

After the installation the software uses a default data base assigned to “Main User”. If you want to add, delete, or change the current user please click on the following button from the “Entry” screen:



You can not delete or add the “Main User”.

Adding a new user

Mark the user edit field. Type in the new name and click “add user”. The name will now appear in the user list. When you click on exit now, the new user will be the current user.

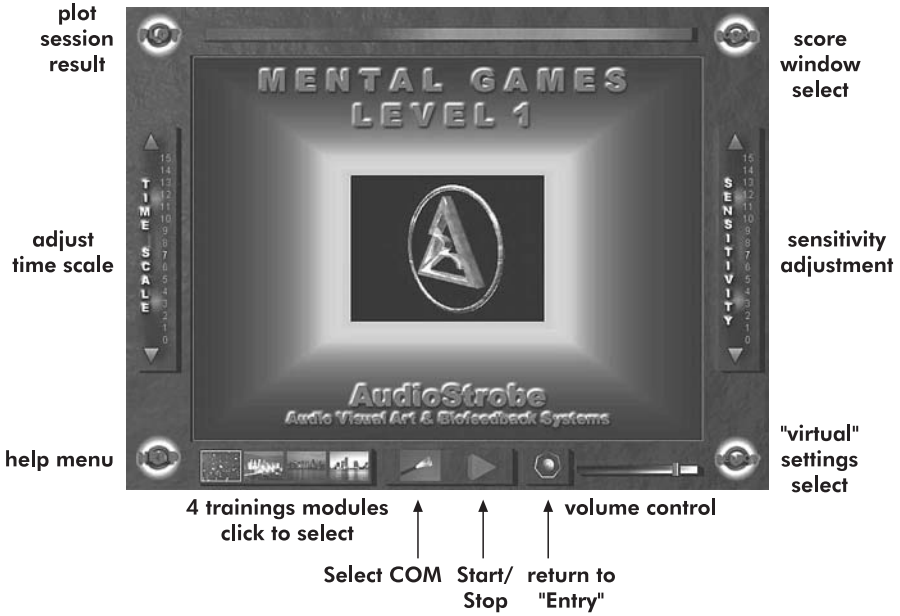
Changing the current

Select the user from the user list by clicking on the highlighted name. The name will appear now in the user edit field. When you click on exit now, the new user will be the current user and will be displayed over the “Set Data Base User” button. The next time you start the software it will still be the current user.

Removing a user

Select the user from the user list by clicking on the highlighted name and clock “remove user”. A security dialog will appear.
When you click “YES” the user will be removed from the user list and his all data base entries will be deleted. “Main User” will be the current user now unless you select a new user from the list before exiting back to “Entry”.

Level 1



Level 1 includes a group of basic biofeedback exercises. Here you can learn to move objects on the screen as you learn to become relaxed and focused. In this sense it's a "classical" biofeedback training application.

There are 4 different stages in Level 1, each more difficult than the last. Starting with stage "A," try to progress through stages "B", "C" and "D". You may also start from any other stage. You select the stage of your choice by clicking on one of the four small pictures on the bottom left of the Level I screen (see figure above).

Before you start training in Level 1 we suggest that you personalize your virtual settings. You start this process by clicking the "select" button on the bottom-right of the screen. You will be presented with four rows of seven pictures, each corresponds to one of the four stages A through D. These pictures will become the background images for your Level I training sessions. You may also select the moving object and sound which your biofeedback will control by clicking on the object at the bottom left of this screen. When done, click on the exit button to return to the Level I screen. At this point you are ready to start your session. However, there are two additional settings you will eventually wish to personalize: sensitivity and time scale (speed).
"Sensitivity" refers to how large a difference there is in your minimum and maximum GSR responses. For some people a range of only 25% is required for such "full scale" response, while others require as much as 1,000%. We suggest that you start your training with the default setting and change the setting based upon your actual results.

"Time scale" refers to how fast the objects on the screen move in horizontal direction in Level 1 or to their basic speed in Level 2. Again, it is best to start with the default setting, and change it as necessary.

Both settings are controlled by a left click of the mouse.

TIP

As an advanced user you may lower the sensitivity and speed up the objects, which will force you to be in control of more extreme psychophysiological changes.

Keeping Score

There is a simple score window, reporting your results for each stage. You can printout your personal scores and follow your progress.

In the **Plot** window you can draw a diagram of your last session with a simple statistic like start and average value, maximum and minimum GSR change in percent or kilo ohms (kOHM; for the hard-core user). Here you can save and load the sessions data or print it out. The plot window functions for Level 2 as well.

Starting a session, follow these steps.

- Start Mental Games and select Level I.
- Connect your ThoughtStream to the PC, place the sensor snugly on your hand, and turn it on.
- Select the COM port if you did not do it already.
- Select one of the four training modules or start symbol by left-single-clicking it.

Once you've completed these steps, you should see a "COM" sign glowing green like this:



The session is now running!

In case the "COM" sign lights red or is stays gray, please check the connection to ThoughtStream including the proper setting for the COM port.
The default setting is COM 1.

TIP

Please be aware that ThoughtStream has an automatic battery save function and will switch off 30 seconds after you put the electrodes off your fingers.
Also each movement of your hand or fingers will distort the right measurement during the session.