

# Mind WorkStation™

Brainwave Entrainment Software For Professionals



Mind WorkStation is geared toward professionals, researchers or people who simply want unprecedented power over their audio/visual stimulation experience.

## **Intuitive Work Environment**

While Mind WorkStation is easily the most powerful application ever developed for brainwave entrainment, the intuitive interface makes it very simple to perform a variety of common tasks. In fact the program does much of the work for you.

The interface is specifically designed for brainwave entrainment and therapy. All the features commonly needed to create sessions are at your fingertips, with additional enhancements making it easier to work with and faster to accomplish what needs to be done.

Mind WorkStation is a full-featured brainwave entrainment software package for professionals.

Whether you are a therapist, researcher, developer, neurofeedback practitioner or simply a brainwave entrainment enthusiast, Mind WorkStation gives you the tools you need to create real cognitive change.

## **Advanced Brainwave Stimulation**

The process of neural stimulation has been perfected and extended in Mind WorkStation. All forms of audio/visual stimulation are possible, along with revolutionary new methods. Everything from isochronic tones and binaural beats, to sound filtering, AudioStrobe, and on-screen visualizations. Complex filtering methods allow you to use any audio source as the carrier for brainwave entrainment. And, with the new frequency band selector features, it can do this without distorting music.

## **Original Content**

Mind WorkStation incorporates some exciting new content types, such as the Ambience Generator, which arranges thousands of small audio samples to produce a unique ambient environment, such as a forest, a beach, crystal bowls or wind chimes. The best part about this type of content is that it is different every time you use it!

Playlists, tone chords, on-screen visualizations and many other unique content types are support. And, ALL content in Mind WorkStation can be used as a carrier for brainwave stimulation.

## **EEG-Driven Stimulation / Biofeedback Integration**

Mind WorkStation is compatible with many popular biofeedback devices and software packages. You can link up to these devices and use them to control entrainment frequencies, to graph their data along with a session, or to control on-screen visualizations as a form of biofeedback game.

## **Effects**

Mind WorkStation ships with a number of advanced effects, including echo, reverb and even "3D sound" where you can place or move a sound in 3D space. You can adjust the pitch or tempo of any sound file. Filters such as band-pass and low-pass are implemented, along with a wide variety of modulation types such as autopanning.

Most importantly, these effects are specially designed to be used with brainwave entrainment. Sound effects in other programs can often act to degrade the effectiveness of brainwave entrainment. In Mind WorkStation, everything has been designed from the ground up to ensure that sound and visual effects will promote brainwave entrainment, not impede it.

# Feature Outline

## Brainwave Entrainment

### **Binaural Beats, Isochronic Tones, Harmonic Box X and more**

All popular brainwave entrainment methods are supported.

### **Sound Filtering**

Sounds and playlists can be used directly as carriers for brainwave entrainment by using complex audio filters. Using all-new features, this can be done without distorting the music.

### **AudioStrobe**

AudioStrobe is integrated, making Mind WorkStation compatible with every AudioStrobe device.

### **Right / Left Hemisphere Stimulation**

Built-in features make it easy to stimulate the left and right cerebral hemispheres individually.

### **Random Stimulation**

Extensive randomization features let you to randomize brainwave frequency, times, phase, intensity, pitch and more.

### **Control Frequencies In Real-Time**

Control the stimulation in real-time (as the session is playing and the client is listening).

## Screen Display

### **Screen Flashing**

Use the computer screen to stimulate the brain.

### **Visualizations**

Choose from hundreds of visual plugins which can be used for their hypnotic properties, as a feedback mechanism for biofeedback, or "pulsed" to provide a subtle form of brainwave entrainment.

### **Color Display**

Colors can be displayed on screen and even changed (ramped) as the session progresses.

## Biofeedback / Neurofeedback

### **EEG & Biofeedback Driven Stimulation**

A range of EEG and biofeedback devices can be used to actually drive the brainwave stimulation.

### **Connect to multiple devices**

Mind WorkStation supports a wide range of both personal and professional biofeedback devices.

### **Gather data and information from biofeedback for research**

Use data collected from biofeedback and EEG devices as an aid in research.

### **On-Screen Visual Feedback**

The screen display features can be used as a feedback mechanism and on-screen visualizations can act as a biofeedback game.

### **3D & 2D Graphing**

Powerful graphing features allow you to easily chart any part of the session, including data received from biofeedback devices.

### **Export to XML, HTML, Text, Excel**

The graphed data can be exported to common data formats.

## Flexibility / Programmability

### **Editing Flexibility**

Controlling frequencies, waveform, intensity, phase and every other aspect of the stimulation.

### **Engines**

Use mini-programs called engines to implement custom formulas, data sets, randomization, and algorithms.

### **For Programmers**

Program directly through an innovative Microsoft .NET plugin interface.

## Content & Creation

### **Sound, Playlists**

Add unlimited sound files to any session, and place them anywhere on the timeline you like.

### **Randomly Generated Content**

Generate unique audio soundscapes, such as forests, beaches, crystal bowls or wind chimes. The best part about this type of content is that it is different every time you use it.

### **Piano Controls**

Use the piano controls to harmonically arrange tones for special types of stimulation, or simply to create a more pleasant session.

### **Microphone Recording**

Recording capabilities, including noise reduction, are included.

### **Text-To-Speech**

Synthesize audio speech from text.

### **Exporting**

Export to MP3, OGG or WAV. Compressed exports are automatically configured for brainwave entrainment purposes based on the content of your session.

# Technical Information

## System Requirements

Windows 2000 / XP / Vista (All Versions)

Required

512 RAM

800x600 resolution

500MHz CPU or higher

60 MB hard drive space for installation

Recommended

2 GB RAM or higher

1024x768 resolution or higher

1GHz CPU or higher

10 GB recommended free hard drive space

Internet connection for easy product registration

## Hardware Requirements

No special hardware is required except in certain situations:

- Microphone (if recording is desired)
- Headphones (for certain types of stimulation)
- AudioStrobe decoder or AudioStrobe-compatible mind machine (if LED glasses are to be used)

## Export Types

Sessions can be exported to sound file types WAV, MP3 and OGG. Compressed exports (MP3, OGG) are automatically configured depending on the content of your session. This is very important with brainwave entrainment content, where incorrect compression settings can negatively affect the signals, or strip them out altogether.

Using the graphing features, data can be exported as delimited text, XML, HTML, Excel or any image format.

## Import Types

Supports importing files from Neuro-Programmer 2 (.NPS files), Brain Sound Studio / Neural Noise Synthesizer (.BWT files), Mind Stereo (.MSES files) and GNaural (.GNAURAL files).

## Compatible Biofeedback Devices

Personal Biofeedback Systems: *ThoughtStream, GSR2, BioScan, emWave (Freeze Framer) and LightStone (Wild Divine's hardware)*

EEG Software Supported: *BioEra, BioGraph, BioExplorer*

EEG Systems Supported: *Brainmaster, Brainquiry PET EEG, Pendant EEG/HEG, Pocket A1-A3, WaveRider (all versions), Neurobit Lite, NeuroAmp, Mindfield MindMaster, OpenEEG, NTA-1000, SpectraLite Pro, Mind Tuner, J&J C-2, J&J C-2 mini, J&J C2+ , QDS NFK, Roshi 1-2+, Procomp2, FlexComp Infiniti, ProComp Infiniti and ProComp5*

NOTE: BioExplorer, BioGraph or BioEra software are required for EEG use.

## Compatible Mind Machines / AVS Devices

Light/Sound Synergizer, Proteus, MindSpa, Procyon, Sirius, Orion, Nova Pro, InnerPulse, PR-2X (with A/S decoder), Mind's Eye.

NOTE: ALL AudioStrobe-compatible devices will work with Mind WorkStation.

## Supported Sound Formats

MP3, OGG, WAV, WMA, MP2, MP1, FLAC, AIF.

MP4 and M4A are also supported using a downloadable open-source plugin.

CD tracks can also be used directly from the CD by importing the .CDA files present on the CD.

Neuro-Programmer 2 sound files (.NPSND) can also be used.

NOTE: Sound formats that are copy-protected cannot be used in Mind WorkStation.

# Version Comparison Chart

	Regular	Professional	Enterprise
All forms of brainwave entrainment (binaural beats, isochronic tones, etc)	✓	✓	✓
Embedding BWE into sound	✓	✓	✓
AudioStrobe	✓	✓	✓
Screen Flashing / Visual Plugins	✓	✓	✓
Random Stimulation	✓	✓	✓
Biofeedback Support: LightStone (Wild Divine), ThoughtStream, GSR2	✓	✓	✓
Sounds / Playlists	✓	✓	✓
Piano Controls	✓	✓	✓
Echo / Reverb	✓	✓	✓
3D Spatial Audio Positioning	✓	✓	✓
Pitch / Tempo Adjustments	✓	✓	✓
Phase / WaveForm Control	✓	✓	✓
Filters (Band-Pass, Low-Pass)	✓	✓	✓
Frequency Band Selection for BWE (patent-pending)	✓	✓	✓
Export to MP3, WAV, OGG	✓	✓	✓
Microphone Recording (with Noise Reduction)	✓	✓	✓
Text-To-Speech	✓	✓	✓
Undoing, Zooming, Syncing, Snapping	✓	✓	✓
Importing Files	✓	✓	✓
Randomization Engine	✓	✓	✓
Data Table Engine	✓	✓	✓
Formula / Expression Engine	✓	✓	✓
Ambience Generator	✓	✓	✓
Additional Ambience Presets	✗	✓	✓
Recording while playing	✗	✓	✓
Graphing Tool	✗	✓	✓
Timer Engine	✗	✓	✓
Advanced Engine Functions	✗	✓	✓
Functions For Expressions	✗	✓	✓
Engine Status / Control Window	✗	✓	✓
Additional (Professional) Session Examples	✗	✓	✓
Additional (Professional) Templates	✗	✓	✓
Real-Time Exporting (Export While Playing)	✗	✗	✓
Real-Time Control Console	✗	✗	✓
EEG Engines (EEG device support)	✗	✗	✓
EEG-Driven Stimulation Protocols & Designs	✗	✗	✓
Additional (Enterprise) Templates	✗	✗	✓
Additional (Enterprise) Sessions	✗	✗	✓
Engine Plugins	✗	✗	✓
Engine Plugins SDK	✗	✗	✓
Free Advanced Support Level	✗	✗	✓
Organization / Company Added To "Practitioners List"	✗	✗	✓
Commercial License	✗	✗	✓

# Advanced Technical Information

## Mind WorkStation's XML Specification

The file type of the program is XML-based, making it easily readable by other programs, and very easy to debug if there is a problem.

## Microsoft .NET Plugins

Enterprise version customers will receive an API developers can use to create plugins. Anyone with Microsoft .NET knowledge will easily be able to use the plugin interface. It is flexible but very straightforward. Once a plugin is constructed, it can be used to gather data from biofeedback engines and/or control any content or brainwave frequency in the session.

NOTE: Plugins are only supported in the enterprise version.

# Mind WorkStation™

## Brainwave Entrainment Software For Professionals

For more information on Mind WorkStation, visit:  
<http://www.mindws.com>

