MindReflector® C-1 Model Neurofeedback Training Application
Product Description

The MindReflector C-1 Neurofeedback Training Application is a true EEG Biofeedback/Neurofeedback training device. It utilizes state-of-the art technology to assess the user's state of mind and deliver information about these states in the form of auditory and visual signals. The MindReflector device uses this information to encourage desirable changes in the user's EEG signal.
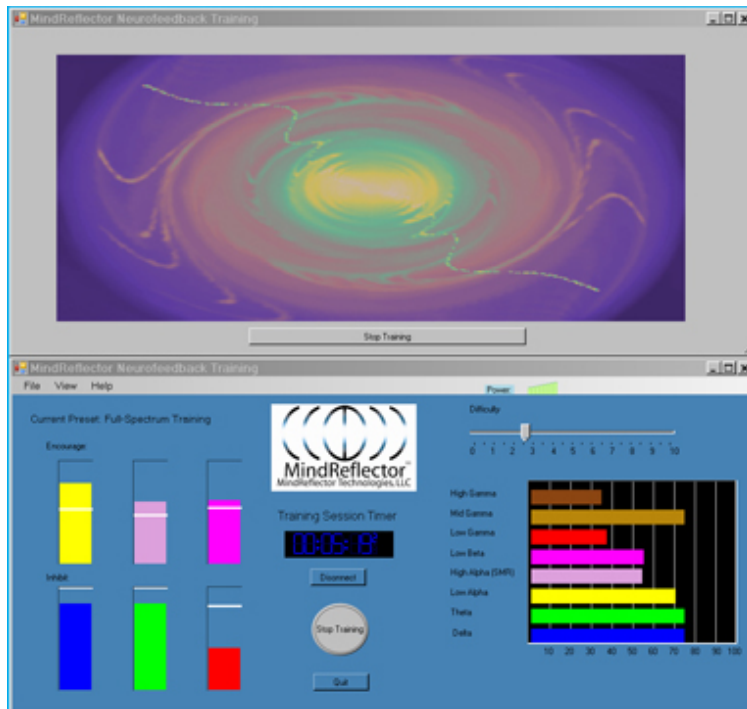
The MindReflector C-1 application uses EEG brainwave data received from the NeuroSky MindWave headset. (For further information on NeuroSky brainwave technology, see www.neurosky.com.)

Real-time information about a user's state of mind is provided by the MindReflector application to offer four different training protocols: Quiet Focus, Meditative Relaxation, Full Spectrum Training, and Alpha/Theta Training. These protocols incorporate proprietary algorithms based on current brain-behavior research and knowledge of the neural correlates of consciousness.

The MindReflector C-1 interprets data received from the headset in the form of digital information about the amplitude of frequency ranges varying from .5 to 49.75 Hz. These ranges approximate eight important EEG signal bandwidths: Delta, Theta, Low Alpha, High Alpha (SMR), Low Beta, Low Gamma, Mid Gamma, and High Gamma.

The training protocols monitor the amplitudes of relevant groups of EEG bandwidths to operate a media playback stream. As determined by the MindReflector protocols, specific bandwidth amplitudes are augmented or encouraged to increase, while others are inhibited or encouraged to decrease.

During the operation of the device, feedback is delivered based on dynamically adjusted amplitude targets. While the adjustment of the targets is carried out automatically, protocol difficulty can be manually adjusted to individualize training sessions. Protocol choice and difficulty specification can be managed by the user or by a clinical operator. Application of the three methods of control, built-in algorithms, manual control, and dynamic automated adjustments, provides a wide range of training options for each protocol and within each session.

MindReflector C-1 Application
(Protocol-specific bandwidths are displayed on the left and the user's EEG signals are shown on the right)

A typical MindReflector C-1 Training Session proceeds in the following manner: The operator/user selects a specific protocol from a drop-down menu. Additional options are then made available that include the selection of a statistics report and the choice of specific media file to be played during the session (audio with accompanying visualizations or a pre-recorded video). In addition to default media options, users may select a media file available on the user's computer or network. The MindReflector application alters whatever audio or video choices are made so that changes in a user's EEG are reflected in the operation of the media player.

At the initiation of training with a particular protocol, the operator/user chooses a degree-of-difficulty level, which specifies media-player sensitivity. The user's EEG patterns then are analyzed by the MindReflector protocol so auditory and visual feedback is provided when the user's EEG patterns meet the protocol's amplitude goals. The media playback is interrupted when one or more of the targeted enhancement or inhibit goals are not met. This form of contingent feedback constitutes the primary method of training. Without the need for conscious control, the brain is able to adjust its EEG response pattern to receive increasing periods of audio and video feedback. Because specific EEG response patterns are correlated with specific states of mind, the brain easily learns how to produce desirable brain states. Over time, users are able to learn how to do this on their own.

An on-board clock assesses the length of a session. Once the desired session length is achieved and training is stopped, the Results Screen is displayed. This screen contains session statistics, a calculated achievement score, and a score-specific hyperlink. The hyperlink takes users to individual web pages on the MindReflector web site. These pages offer information describing the specific level of attainment obtained by the user, as well as offering additional resources, including the opportunity to connect with MindReflector social media networking sites and to contact MindReflector staff for personalized feedback and support.

Guided by specific patterns of dynamically determined augments and inhibits, each MindReflector session provides information the user can use to achieve optimal efficiency in specific states of consciousness, as well as a mental posture of resiliency, flexibility, and openness.

Additional information on MindReflector Technologies, LLC and EEG Neurofeedback can be accessed at: www.mindreflector.com

MindReflector Technologies, LLC
4410 Linglestown Road
Harrisburg, PA 17112
Land: 717-652-0609
Fax: 717-545-1948
info@mindreflector.com