# CD / Spectrum Pro 2.0

***CD / Spectrum Pro Version 2.0*** is a CD-Audio player with built-in graphical spectrum analyzer. It was designed to run on ***Windows 95***, and the new ***Windows NT 4.0 Shell Update Release*** (SUR). This document describes how ***CD/Spectrum Pro*** operates.

## Contents:

## Section I - Hardware Requirements

Although ***CD/Spectrum Pro*** will run on a 486, a Pentium is recommended for optimum performance. If your machine has trouble keeping up with the processor-intensive spectrum analysis, you may choose to use only the CDaudio part of the program.

Of course a CD player is required for the CDaudio portion of the program to function. Version 2.0 of ***CD/Spectrum Pro*** was not designed to handle multiple CD players and will simply choose one to use if more than one is present.

A sound card in necessary for the spectrum analyzer to function. The spectrum analyzer uses the wave capture on the sound card to determine what the CDaudio signal looks like. If no sound card is present, or the sound card does not support wave capture, you may choose to use only the CDaudio part of the program.

## Section II - Installation

Installation is simple. Just copy the program on to your hard disk and run it. There is no further configuration or installation necessary.

## Section III - Registration

If you enjoy using ***CD/Spectrum Pro***, you may register it at a cost of $20 US by using the contact information provided in the program. You are also invited to visit the WWW page at http://www.halcyon.com/gator/cdspro.htm

## Section IV - General Information

The following notes may be helpful when using ***CD/Spectrum Pro***:

- The trackbar between the Configure and CD-Audio buttons adjusts master system volume.
- Tooltips are provided for most buttons. Let the mouse cursor linger over a button to get a small text description of what the button does.
- The program remembers its last position and goes back to that location the next time you run it. If it

comes up minimized, that means you closed it while it was minimized last time.
- You can use either or both of the CDaudio and spectrum analyzer portions of the program.
- The Register button turns into an About button once the program is registered.

## Section V -  Configuration

The configuration dialog allows you to customize **CD/Spectrum Pro** to fit your individual tastes. You may configure the following items:

- *HiColor* - the color used to display the parts of the spectrum that approach maximum magnitude.
- *MidColor* - the color used to display the parts of the spectrum that approach HiColor.
- *LowColor* - the color used to display the lower magnitudes.
- *BkGndColor* - the color used to draw the background of the spectrum.
- *Intro Play Length* - the number of seconds that will be played from each track in *Intro* mode.
- *Stop CD On Exit* - If this is chosen, **CD/Spectrum Pro** will stop the CD from playing when you exit the program.
- *Retracted CD Play* - If this is chosen, the CDaudio part of the program will retain ownership of the CD device even when the CDaudio window is hidden. This facilitates using *Programmed*, *Random*, *Repeat* and/or *Intro* play without having the CDaudio window exposed. Note that if this option is not chosen, *Programmed*, *Random*, Repeat and *Intro* play will not function when the CDaudio window is not exposed.
- *Use as Default CD Player* - This tells Windows to use **CD/Spectrum Pro** as the default CD Audio player.
- *Always on Top* - When this is chosen, **CD/Spectrum Pro** will stay above any other windows on the screen.

## Section VI - CD Audio

The CD Audio player in **CD/Spectrum Pro** has the following features:

It stores the CD information in a format that the standard Windows **CDPlayer** can understand, so if you have already entered your CD titles and tracks, **CD/Spectrum Pro** will read them so you will not have to enter them again.

Several buttons make the CD audio player easy to use. To play a track on the CD, simply click on the track's number in the grid. Other buttons include:



*Repeat* button. When it is depressed, play will repeat after the program or CD is finished.



*Random* button. When it is depressed, tracks will be played in a random order.



*Program* button. When it is depressed, tracks will be played in the order dictated by the program for the current CD.



*Intro* button. When it is depressed, only the beginning of each track will be played. This option affects Regular, Random, and Programmed play.



*Eject* button. This button ejects the CD. On computers with CD players that support it, this button will also suck the drawer back in. Not all CD players support this.



*Edit Program* button. This button launches a dialog box used to edit the programming for this CD. This

dialog box and the programming of a CD are discussed below.

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*Edit CD List* button. This button launches a dialog box used to edit the title, artist and tracks on this CD. The dialog box and entering of this information are discussed below.

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*Play* button. This button begins playing the CD.

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*Back* button. This button moves back to the previous track. In random or programmed mode, it moves to the previous random or programmed track, respectively.

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*Forward* button. This button moves forward to the next track.In random or programmed mode, it moves to the next Random or programmed track, respectively.

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*Pause* button. When depressed, play will be paused.

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*Stop* button. Stops play.

A trackbar is also provided to locate the current position within a track. Simply drag the trackbar to the desired location and play will resume there.

**Editing the Program list:**
When the *Edit Program* button is chosen, a dialog box is launched that facilitates editing the programmed play list. This dialog box has two groups of track titles. The one on the right is the list of tracks on the CD. The one on the left is the current programming for the CD. You can use the *Remove*, *Move Up*, and *Move Down* buttons to adjust the currently highlighted track in the left list. You can use the *Insert* and *Append* buttons to insert and append the currently highlighted track in the right list into the left list. When you are done, you may choose *OK* to save the program, or *Cancel* to discard your changes. Hint: remove all the entries in the left list and press *OK* to reset the left list.

**Editing the CD Title Artist and Tracks List:**
When the *Edit CD List* button is chosen, a dialog box is launched that facilitates editing the title, artist and track titles for the current CD. Enter the title of the CD in the appropriate box. Then enter the artist and track title for track 1. If the same artist performed all the tracks on the CD, press *Propagate Artist* to use that artist's name for all tracks. If the CD is an assortment of tracks from different artists, enter each artist's name while editing the track title for that track. You can move between track titles by pressing the up/down buttons next to the track number. Hint: When you are done editing a text, press <Enter> to automatically move to the next field. The *Overview* button allows you to get a look at the entire CD. A list of track titles is presented.

# Section VII - Spectrum Analyzer

The Spectrum Analyzer employs a Fast Fourier Transform to derive the frequency spectrum of the sound as it comes off the sound card. This spectrum is then displayed in the Spectrum window as a series of graphics. Below the frequency spectrum, left and right volume are displayed.

Four buttons adorn the right side of the Spectrum Analyzer: *Left & Right*, *Center*, *Split* and *TaskBar Icon*.

- *Left & Right* - When this button is depressed, frequency information for both left and right channels is displayed.
- *Center* - When this button is depressed, monaural frequency information is displayed. This button and the *Split* button cannot be depressed at the same time.
- *Split* - When this button is depressed, the left and right channel frequency information is physically separated in the graph. For this reason, monaural information may not be shown in this mode so this button and the *Center* button cannot be depressed at the same time.
- *TaskBar Icon* - When this button is depressed, **CD/Spectrum Pro** places a taskbar notification icon on

the system taskbar. This icon shows the current volume levels for left, right, and/or monaural sounds - depending on the settings of the *Left & Right* and *Center* buttons. Note: while this button is depressed, **CD/Spectrum Pro** retains ownership of the wave device even when the spectrum window is retracted.

A *Gain* trackbar is also provided to help adjust the gain of the signal into the spectrum analyzer. This has no effect on volume - to change volume, look to the trackbar between the *Config* and *CD-Audio* buttons.

## *Thank you for your interest in CD/Spectrum Pro Version 2.0.*