Calma

COMPUTER ASSISTED LEARNING FOR MUSICAL AWARENESS

Calma Handbook

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Contents

Background to the Project

T he Music Department at the University of Huddersfield has been developing a Computer Assisted Learning (CAL) package designed to improve musicians' aural awareness. The three year project, funded by HEFCE's Fund for the Development of Teaching and Learning (FDTL) initiative, is based on Professor George Pratt's book *Aural Awareness: Principles and Practice* (Oxford University Press, 1998).

It draws on two areas of expertise within the Department of Music at Huddersfield. Firstly, a team led by Professor Pratt has developed innovatory approaches to the teaching of aural skills, making the study more creative and relevant to real-life musical situations. The approach is related to, but broader than, conventional aural training which is too often detached from performance, composition and the critical appraisal of real music. Traditional dictation-based aural courses, now thought by many to be outdated and of limited relevance, can engender a narrow approach to listening which is so focused on pitch and duration that it may even deaden students' awareness of other crucial aspects of music. Huddersfield's approach aims to enhance students' awareness of, and responsiveness to, aspects of sound such as timbral variation, nuances of performance and intonation. Issues such as the listeners' critical response to music and aural imaging are also addressed.

Secondly, a team led by Dr. Michael Clarke has developed interactive computer assisted learning packages for the teaching of sound synthesis - the SYnthia program received the European Academic Software (EASA) Award for Humanities. The project has brought together expertise in these two areas to produce a courseware package (which combines software, this handbook, student worksheets and a website). A modular approach has been adopted in the design of the courseware to provide a flexible means to integrate it into existing courses.

About the courseware

The courseware package includes specific CAL applications dealing with particular aspects of aural, and a customisable shell for the creation of critical listening exercises.

The customisable software – the *Calma Editor* and *Player* - allows the creation and use of listening exercises that link text to specific time points on *any* CD. Uses include the creation of listening guides, commentaries, and listening exercises prompting detailed and directed aural analysis. Students can read about or be asked questions on any piece of music, then hear it at the touch of a button. Student response would be on paper or on the computer as appropriate, with feedback either provided by the lecturer as part of the exercise, by peers during private study, or in class and tutorials. The software could also be used to create dictation

exercises and stylistic recognition tests, utilising the flexible access to the CD and its ability to import graphics.

Lecturers can use the exercises provided on the starter CD (containing copyright cleared audio from Hyperion, Naxos and EMI) in their courses, modify them slightly, or make their own exercises with the simple editor (which only requires a very basic level of IT literacy). All music is available, providing the author and the student have access to the same audio CD (typically using a copy owned by the institution's library). By separating the copyrighted audio from the exercise questions, it is possible to create exercises which use recorded music covered by copyright restrictions. Exercises could then be sent to the Calma database for access via the website, allowing other lecturers around the world with the Calma software to share the material and add to this growing resource.

Summary

- An imaginative use of technology embedded into courses, integrating computer assisted learning with class work and private study.

- An extendible courseware creation environment with many varied uses in music and beyond.

- A strategy to encourage the exchange of teaching resources internationally via the Internet.

- High quality sound avoiding many problems of copyright.

- An easy way for lecturers to create materials for:
  - ☐ independent learning
  - ☐ group work
  - ☐ seminar preparation

- An easy, flexible yet sophisticated way to link:
  - ☐ CD quality sound
  - ☐ text
  - ☐ graphics
  - ☐ pictures
  - ☐ scanned documents

Installing the software

System Requirements

■ The Calma software runs on an IBM Compatible PC with Windows.

■ Required
  Pentium™ 75MHz
  Windows 3.11 or later
  16 Mb RAM
  10Mb Hard Disk Space
  CD-ROM Drive
  Soundcard with General MIDI capability (needed for Mozart and Tempo exercises only).
  16 bit colour, 800x600 screen resolution
  Internet connection (only required to download the software).

■ Recommended (in addition to above)
  Pentium™ 200MHz
  Internet connection (for exercises that link to web sites).

Installation Instructions

1. Go to the Calma website at http://www.hud.ac.uk/calma.html, then follow the link to Downloads.

2. Click on the link to download the Calma software (the file is called Calma.exe and is about 4.1Mb in size). You will be asked where you would like to save the installation file (the C:\Windows\Temp folder is a good place). Click OK to save the file in your chosen location, and it will download.

   ☐ *If you need to install the software on a PC without an Internet connection and do not have a high capacity removable storage drive (e.g. a Zip drive), try using a disk spanning program to copy the Calma files onto four floppy disks (there are many freeware versions available on the Web).*

3. When the file has downloaded, go to the folder you chose and double click the file Calma.exe to begin installation. Follow the on-screen instructions.

Calma Audio CD

To use the example exercise files supplied, you will need a copy of the Calma Audio CD. The CD contains copyrighted music owned by the Hyperion, EMI Classics and Naxos record labels. Use of these extracts has been granted by these companies for

use within *UK Higher Education Institutions only* for educational use on the understanding that the CD is not sold, publicly performed, broadcast, or copied.

Tracks 2, 4- 5, 17-21 © Calma 1998-2000
Tracks 1, 3, 6-8, 13, 22, 24-5 © Hyperion 1986-97
Tracks 9, 14, 16, 23, 26-33 © Naxos 1992-9
Tracks 10-12, 15 © EMI Classics 1983-95

AutoPlay for CDs

Some computers are set so that when a CD is inserted, it automatically begins playing. If the Windows **AutoPlay for CDs** facility is active, the Calma software may not be able to access the CD drive. This can be avoided by holding down the *Shift* key when you insert a CD, until the CD has been read by the CD ROM drive. It can be switched off (which is preferable) by double-clicking the My Computer icon, then on the View menu selecting Options then the File Types tab. Scroll down and select Audio CD, then click Edit. Click the Set Default button so that Play is *not* bold and exit. It can be reactivated by clicking Set Default so that Play *is* bold. (If anyone knows of a less convoluted way, please let us know!)

Additionally, if you have been listening to CDs using another Windows program (e.g. Windows CD Player), you will need to close these to allow the Calma software CD-ROM access.

Small Fonts

You may be requested to change to Small Fonts when starting the package. If this happens, right click the Desktop and select Properties from the pop-up menu. In the Display Properties box which appears, click the Settings tab and then choose Small Fonts from the Font Size list. You will be asked to restart your computer.

Installing Calma on a network

If installing on a network, you must ensure that all files you choose to install are set to read-only status to enable more than one user to access them. This includes the Calma program files and any exercise, graphics or audio files that you are using.

Network Support Notes (as provided by Asymetrix Corporation)

Toolbook ensures that under normal circumstances, books on network file servers are not corrupted by multi-user access. Network file protection is provided by TB50NET.EXE file, which is automatically installed with Toolbook.

How Network Access works

For file protection to work across a network, the TB50NET.EXE file must be stored in a directory in each user's path statement. When a user tries to access a Toolbook file on the network, the file's DOS read-only attribute affects what happens. If a book stored on a network is a read-only file, and it is opened:

■ Other users can open the book and copy it, but they cannot delete the book, change its file attributes, rename it, or save changes.

■ Other applications can open the file and access information, but they cannot change its file attributes, rename the file, or save changes.

Using the Calma Editor & Player

This section will guide you through using a Calma exercise with the Calma Player and creating one with the Calma Editor. It is suggested that you begin by looking at some of the exercise files in the Calma Player, then do the Tutorial in the Calma Editor. Please note that you will need the Calma Audio CD to hear the musical examples in both cases. If you do not have a copy of this, the exercises will do everything except play the correct audio (you will at least get a feeling for how they work!).

About the Calma Player

The Calma Player links pages of text with graphics and audio, allowing you to listen to extracts of pieces and compare them in a variety of ways, dependent on the aims of the individual exercise.

Slider
Click and drag to find a point within an extract

CD Timer

CD Controls
Use these controls to start, pause, or stop an extract (if there is one), begin a loop, end a loop, and turn loop mode on and off

Index
Showing current page with highlight. Click on a page name to move to that page

Navigation bar
Click arrows to move between pages sequentially. Shows current page
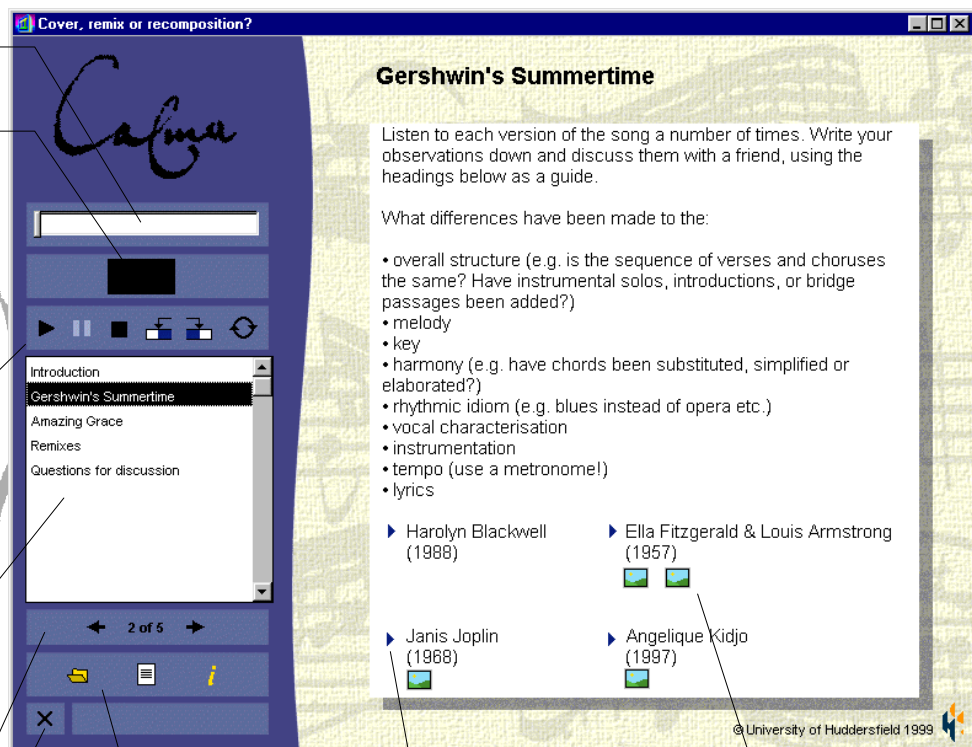
Exit

File controls
Use these icons to open a file, view the title page, and see the online help

Play button
Click to play the associated extract. There are four on this page.

Graphic button
Click the button to view a graphic. It will open up in a new window

Cover, remix or recomposition?

Gershwin's Summertime

Listen to each version of the song a number of times. Write your observations down and discuss them with a friend, using the headings below as a guide.

What differences have been made to the:

• overall structure (e.g. is the sequence of verses and choruses the same? Have instrumental solos, introductions, or bridge passages been added?)
• melody
• key
• harmony (e.g. have chords been substituted, simplified or elaborated?)
• rhythmic idiom (e.g. blues instead of opera etc.)
• vocal characterisation
• instrumentation
• tempo (use a metronome!)
• lyrics

▶ Harolyn Blackwell (1988)   ▶ Ella Fitzgerald & Louis Armstrong (1957)

▶ Janis Joplin (1968)   ▶ Angelique Kidjo (1997)

Introduction
Gershwin's Summertime
Amazing Grace
Remixes
Questions for discussion

◄ 2 of 5 ►

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Using the Calma Player

Opening the Calma Player

1. Make sure the Calma Audio CD is in the CD drive (see above). Select Calma Player from the Start Menu (or double click the Calma Player icon in the Calma folder).
2. When the package opens, click on the opening screen to clear it.
3. Then click on the open button. In the Open File dialogue box, select the directory where the file you want to open is stored (normally Exercise). If the file is a Calma Tour File, make sure the 'List files of type:' drop-down selection box is set to 'Tour files (*.ctf). If the file is a Calma Exercise File, the 'List files of type:' drop-down selection box should be set to 'Exercise files (*.cef).
4. Click OK. The exercise will open and you are ready to start.

The controls are quite straightforward, although you might find the following explanation helpful.

Title Page
This page gives you details of the aims of the exercise, the CD(s) needed to play the musical extracts, the name of the author and any copyright/acknowledgement details. To continue, click on the arrow in the bottom right hand corner. To return here later, click the button.

Moving between pages
Either click on the name of the page on the index to the left of the page, or click on the forward or back arrows to move through the pages in order. The display also shows how many pages there are, and the number of the one you are on (e.g. 3 of 7).

Listening to an extract
Some pages have music connected to them (either CD audio, MIDI or a .wav file). This will normally be referred to in the text (e.g. "Now listen to the extract..." etc). You can listen to it by clicking the main play button on the left side of the screen. There are also pause and stop buttons here.

Pages may also have separate play buttons next to text (normally if there is more than one piece of music on the page). Again, click these to hear the referenced music. The button will be highlighted by a yellow box to show you that it is active. While the button is highlighted, the CD controls at the side of the screen will act only on the extract linked to the button. To play extracts linked to the page, click the button that is highlighted to deselect it, and then use the CD controls at the side of the screen.

Slider
To navigate around an extract, use the slider control just below the Calma logo. Whilst an extract is playing, click on the position marker and drag it to change

where you are in the track. Let go, and the extract will play from that point. Use the CD timer to find where you are in the extract.

Loops

There is a loop facility which allows you to define and listen to sections of a track to focus your listening. To do this, start the music playing then click the start loop button when you reach the point where you want the loop to start. Let the music continue to play, then click the end loop button when you want the loop to end, then click stop (unless you want to continue listening!).

To listen to a loop, click the loop mode button ⟳, which will then be highlighted ⟳, if you have defined a loop. The loop will be shown in blue on the slider (unless it is very small). Click play to listen to the loop. It will play repeatedly until you click stop. To turn off loop mode, click the loop mode button again to deselect it.

Pictures

Some pages have pictures attached to them. Pictures can include scores, photographs, diagrams etc. To view a picture, click the picture icon , and it will open in a new window. You can move it around the screen by clicking and dragging its title bar, minimise/maximise it, or close it. All visible pictures will remain open even if you change the exercise page (allowing you to relate them to different contexts).

About the Calma Editor

The Calma Editor allows you to create two types of listening exercise: a Calma Exercise or a Calma Tour.
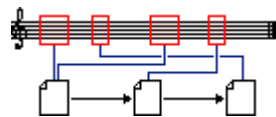
Calma Exercises are text led: users read text and can then listen to an associated audio extract. You can specify isolated extracts of one or more audio CD's, and link these with pages of text and graphics. Possible uses include exercises that compare and contrast aspects of a piece (e.g. variations) or require focused listening to separate musical examples, and standard dictation or stylistic recognition tests.
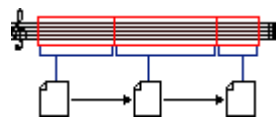
Calma Tours are audio led: users listen to a piece of music and the text changes on the screen depending on where they are in the piece. An example would be a program note or listening guide where the text changes as the appropriate section is heard. Tours are useful for creating guided listening sessions, analyses and commentaries in particular.

The following tutorial begins by looking at creating an Exercise, followed by creating a Tour (although the method is mostly very similar). You can use the

Exercise file Tutorial.cef if you like, or start from scratch using the information below.

Creating a Calma Exercise

The Calma Editor enables you to create a variety of exercises which link CD audio and other audio files to text and graphics. Once you have finished creating an exercise, your students can run it using the Calma Player (which has the editing facilities stripped out so that your work cannot be altered). If you have not already done so, open the Calma Player and try out some of the sample Calma exercises to give you a better idea of what is possible with the package.

Palette Button
Brings up the Tool Palette if it has been closed

New
Click to start a new Exercise or Tour

Tool Palette
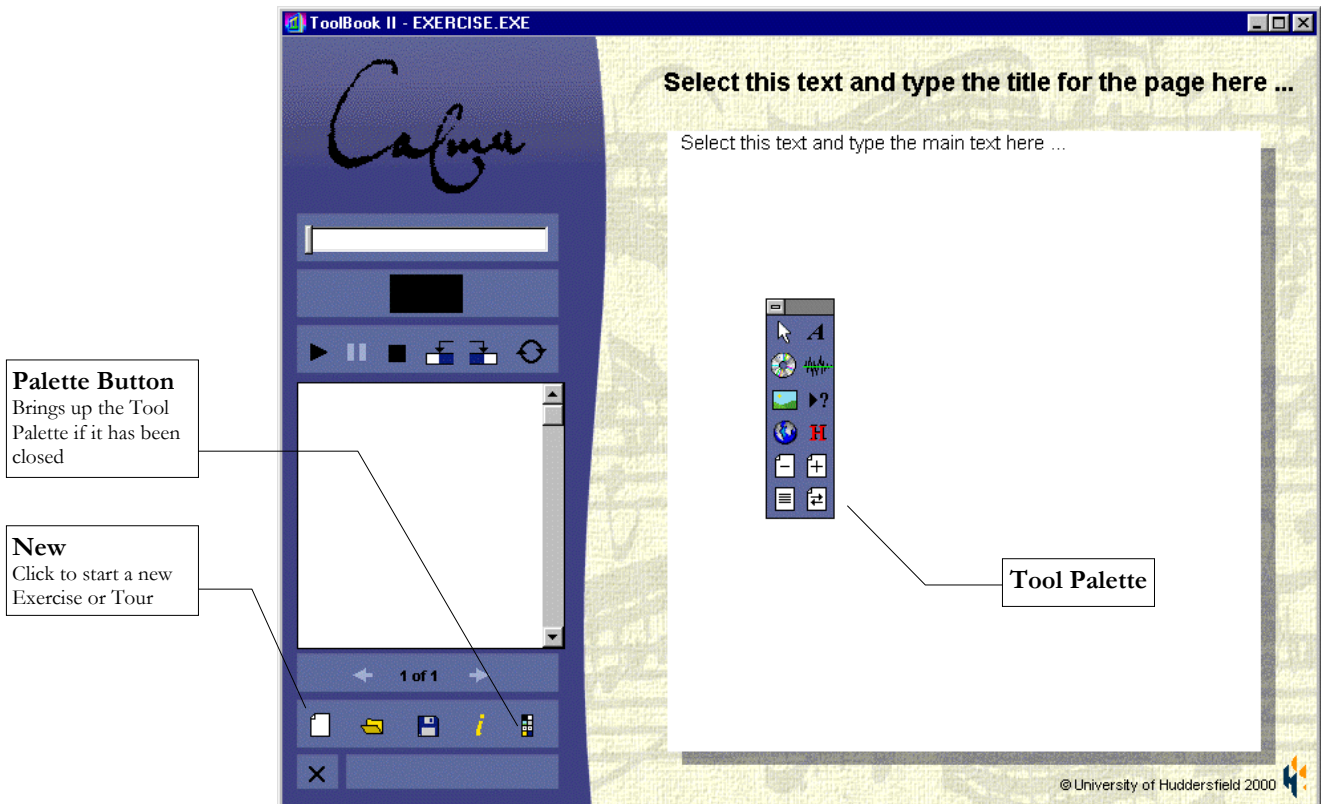
Selection Tool		Edit Font
Add a CD Extract		Add a Wave or MIDI file
Add a Graphic		Add a Random Play Test
Add a Web Link		Add a Hotword
Delete Page		Add Page
Edit Title Page		Reorder Pages

Add Introduction Page
(Calma Tour only)

Opening the Calma Editor and getting started with an Exercise

1. Make sure you have an audio CD is in the CD drive (see above). Select Calma Editor from the Start Menu (or double click the Calma Editor icon in the Calma folder).

2. The Editor has a Tutorial exercise which will take you through the process of creating a Calma exercise. When the package opens, accept the license agreement when prompted, then select CD Exercise and click OK.

3. The title screen editor window will appear. Click Cancel

4. Click the file open icon ⬜. Double click the Exercises folder, choose Tutorial.cef and click OK. If you want to start from scratch, skip this stage.

Navigation

There are two ways of navigating through an exercise:

- On the left of the screen in the Index, you can click on a page name to move to it.
- Below the Index there are two arrows. These allow you to move to the next (right arrow) or previous (left arrow) page. The left arrow is grey to begin with and will not do anything whilst on the first page (no previous pages), but clicking on the black 'next' arrow will take you to the next page. When you get there, notice that both arrows are now black and available to use.

You will need to create some extra pages first (see below).

Entering and editing text

A Calma file has a number of pages that can contain text (including hotwords), audio extracts, interactive exercises and graphics. Each page has a title which is automatically transferred to the index list on the left of the page (the current page is highlighted with a black bar).

▶ Click in the title text at the top of the page and change it slightly. You will see what you are typing appear in the index list. Titles need to be less than 32 characters long.

The text is limited to about 200 words per page, depending on its size. The reason for this is to provide manageable chunks for the user to read. If you want to use longer texts, it is best to run them on to separate pages.

Entering text in this main text field is similar to entering text in any word processing package (i.e. click and type). All text in the main window is editable.

▶ Try typing in some text, then deleting it.

■ To change the look of the text:
1. Select it and click the Font Editor button **A** in the floating Editor Palette (if you can't find the Editor Palette, click the palette button ▦ at the bottom left of the screen).
2. In the Font Editor window, change the text style then click OK.

Most Windows text keyboard shortcuts work (e.g. select your text and then press the ctrl and b keys for bold, ctrl and i keys for italic, ctrl-c for copy, ctrl-v for paste etc.).

▸ Now select some text and change its style.

Remember that enlarging the text will reduce the number of words you can show on a page, and that any unusual fonts you choose must also be on the end user's machine.

You can also paste text in from other applications (e.g. a word processor) instead of typing it in. There may occasionally be some anomalies when pasting in text (i.e. bullets and other unusual characters may not be pasted correctly).

Hotwords
Hotwords enable users to click on a word (coloured red) to bring up an associated text box (i.e. *hypertext)*. This can be used to provide some additional information, like a definition of a musical term for example.

In the Calma Editor *,* you view associated hotword text by clicking the Hotword button **H** on the tool palette and then clicking the hotword (in the Calma Player users only need to click on the hotword itself).

■ To create a hotword:
1. Select a word and then click the Hotword button on the palette (to turn on Hotword Mode).
2. A yellow text box will appear with selection handles around it. Double-click in the box to type in your text

☐ You can change the size of the box by moving the cursor to the bottom middle selection handle until it changes to a 2-headed arrow, and then dragging it to the size you want.

3. To test the hotword, click the Selection tool �N on the palette (if it's highlighted), make sure you are in Hotword Mode (the Hotword button in the palette will be highlighted), and then click the hotword (the cursor should change to a hand icon).
4. To remove a hotword, turn on Hotword Mode and then *right-click* the hotword you want to remove.

▸ Try creating and then testing a hotword on this page.

Web links

In the Calma Editor , you open web links by highlighting the Web Link Mode button 🌐 on the tool palette and then clicking the specified link (in the Calma Player, users only need to click on the link itself).

■   To create a web link:

1. Check that the Hotword Mode and Web Link Mode buttons are unhighlighted, then select the word you want to turn into a web link.

2. Click the Web Link Mode button to bring up the web link editor. Type the full address of the page you are linking to (including the http:// bit) and click OK.

3. Your selected text will turn blue and be underlined, indicating it is a link.

4. With Web Link Mode turned on, click your link to launch the specified address in a browser (e.g. Netscape or Internet Explorer).

5. To edit your link, right-click on your link (the Web Link Mode button on the tool palette must be highlighted).

▶ Try creating a web link on this page, and then test it.

If no browser is installed or the program cannot locate a browser, an error message will be displayed. You will need a web connection for this function to work.

Adding, deleting and reordering pages

■   To add a new page, click the Add New Page button ⊞ on the editor palette. This will add the page *after* the one you are on.

■   If you want to delete a page, click the Delete Page button ⊟ on the editor palette. This will delete the page you are viewing.

▶ Now add a new page by clicking the Add New Page button. This will take you to the new page. Add some new text and a title then return to this page. Then go back to the page you have just created and delete it by pressing the Delete Page button. This will take you to the next page in the exercise..

■   To reorder pages:

1. Go to the page you want to move.

2. Then click the Reorder Pages button ⇄.

3 In the dialogue box, select where you want to move the current page. It will automatically be moved. You can check its position in the index.

▶ Move the current page to the beginning of the exercise by clicking the Reorder Pages button, then selecting the first page. This page will appear at the beginning of the tour (check this in the index). You will need to add some new pages if you haven't already done so.

Adding CD extracts

You can add CD extracts to a page in two ways:

- Attaching it to the page itself (if you only want **one** piece of music accessed from the page).
- Attaching it to a button (if you want **more than one** piece of music on the page, as you can have more than one button on a page). Buttons are useful if you have a number of extracts which you want the user to compare, for example two performances of the same piece.

■ To add music to a page:

1. Make sure you have the CD for the exercise in the CD drive.
2. Click the CD button 🔵 on the palette to bring up the CD Editor window. You will use this each time you want to add, edit or remove audio on a page (or button). You can move the CD Editor window by clicking and dragging its title bar to the position you want on the screen.
3. Choose the track of the CD you want to use by clicking the arrow next to the window which says 'Track 1' and selecting a track. You can listen to the tracks by clicking the play button. The Editor automatically reads the CD and displays the number of tracks available.
4. For the moment, select the whole track by clicking OK and then selecting Page when asked (as you are adding music to a page).
5. The CD Editor window will close and the extract you have chosen will be attached to the page. Click the Play button on the left of the screen to hear it.

▸ Try adding some CD audio to a page, and then listen to it.

■ To add music to a button:

1. Define your extract in exactly the same way as you would for a page and click OK.
2. Click Button when requested.
3. Your button (and associated text box) will appear in the bottom right-hand corner of the screen.
4. To move the button to the required position, simply drag it.

Initially it is in Edit Mode. This allows you to move the button around (you can use the arrow keys on the keyboard to 'nudge' buttons), add a label or change the music assigned to it by clicking the CD button again.

To edit or add text to a button, double click in the attached text box and type. To increase the size of the text box, drag its boundaries as with a hotword.

Edit Mode is active when the Selection tool button is highlighted on the editor palette. If you click any button when in Edit Mode, a box will appear around the button signifying that it has been selected. Pressing the delete key at this point will delete the button - be careful, but you will be warned!
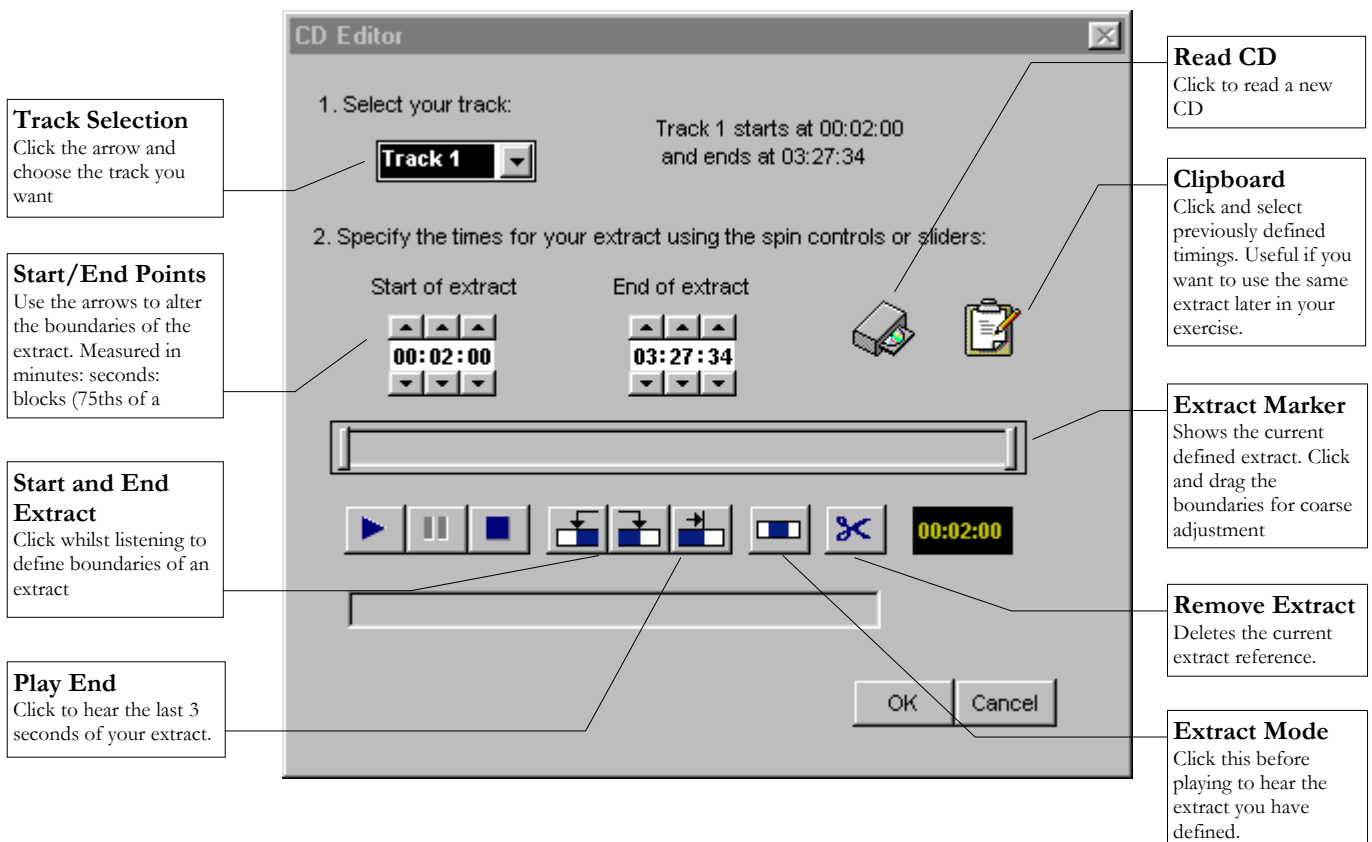
To hear the music attached to the button, make sure you are in Play Mode by clicking the Selection tool button, if it is highlighted. Then click the button you want to listen to. The cursor will change to a hand as you move it over the button.

▶ Try creating two buttons to play different CD tracks, and then listen to them.

■ Selecting part of a track
If you only want a *part* of a CD track (perhaps a phrase or section of a piece only), you will need to define the start and end points of the extract in the CD Editor.

1. Click the CD button on the palette to open up the CD Editor.

Track Selection
Click the arrow and choose the track you want

Start/End Points
Use the arrows to alter the boundaries of the extract. Measured in minutes: seconds: blocks (75ths of a

Start and End Extract
Click whilst listening to define boundaries of an extract

Play End
Click to hear the last 3 seconds of your extract.

Read CD
Click to read a new CD

Clipboard
Click and select previously defined timings. Useful if you want to use the same extract later in your exercise.

Extract Marker
Shows the current defined extract. Click and drag the boundaries for coarse adjustment

Remove Extract
Deletes the current extract reference.

Extract Mode
Click this before playing to hear the extract you have defined.

CD Editor dialog:
1. Select your track:
Track 1
Track 1 starts at 00:02:00 and ends at 03:27:34
2. Specify the times for your extract using the spin controls or sliders:
Start of extract 00:02:00
End of extract 03:27:34
00:02:00
OK Cancel

2. There are three ways to define an extract from a CD track, and it is often best to use a combination of all three:

☐ Click the play button to start the CD. When you get to the point at which you want the extract to start, click the Start Extract button. When you reach the end of the music you require, click the Stop Extract button. The marker bars will move.
☐ Click and drag the marker bars to the correct position. This will give you a fairly coarse adjustment.

☐ Use the arrow keys above and below the End of Extract displays to adjust the referencing. The display is marked in minutes : seconds : blocks (CDs blocks are 75ths of a second!).

3. To listen to the extract you have defined, turn on Extract Mode by clicking the Extract Mode ▢▪▢ button . Then click Play to play the defined extract. To listen to the last three seconds of the extract only, click the Play End 🔳 button. This is useful for getting the ending in exactly the right place. To listen to the whole track again, turn off the Extract Mode by clicking the button again, then click the Play button.

4. When you are happy with your extract, click OK, then select Page or Button as before.

5. If you want to delete music from a page. Go to the page required, click the CD button, then click the Remove Extract button ✂. To delete a button, select it the press Delete.

If you know approximately where the music you want is in the track, it is best to drag the markers to about the right place to start with. Turn on Extract Mode and listen. You can adjust them again by dragging, or use the Start Extract and Stop Extract buttons to be a little more accurate.

For a lot of music, it will be hard to get the cut at exactly the right point. To fine tune your extract, use the block adjustment arrows, always checking the position by listening.

If you want to repeat a timing from a different page or button, click the Clipboard button 📋 to see all other defined extracts. Selecting the extract you want to reuse automatically transfers it into the CD Editor window. This is useful if you want to repeat an extract on more than one page.

▸ Try editing a button or page extract to play a short phrase from one of the tracks on your CD.

Adding a wave or MIDI file

In addition to CD extracts, you can add a wave file (*.wav) or MIDI file (*.mid, *.rmi) to your exercise. These need to be created in an external application, like a sequencer or Windows Sound Recorder. Other sound file formats can be converted using a sound editing package. Remember there might be copyright restrictions for some audio.

■ To add a wave or MIDI file:

1. Click the Add Wave or MIDI file button 〰 on the tool palette.

2. Locate the sound file you wish to attach and click OK.

3. A sound button will appear in the bottom right corner of the screen. Drag it into the desired position and type in your text label (if any) in the same manner as for a CD audio button.

4. To hear your wave or MIDI file, deselect the button by clicking the Selection tool in the tool palette (if it's highlighted)
5. Click the button to play the audio. While the button is highlighted, the controls at the left of the screen will play/pause/stop etc using the sound file defined for the highlighted button.

NB Any .wav, .mid or .rmi file you include in your exercise must be stored in the same directory as the related exercise file (*.cef) to enable your users to hear them. Be aware that wave files, in particular, use up a lot of storage space.

▸ Try adding a wave file and a midi file to your exercise.

Random Play
This function allows you to specify 2 to 10 extracts to be played at random. The user responds to the associated question by selecting an answer from those available, like a multiple choice test. An author-defined response will be displayed (e.g. "Well done! That was the correct composer!")

■   To add a Random Play test:
1. Click the Random Play button ▸? to bring up the setup window.
2. Select the number of extracts you want users to choose between (2 - 10).
3. Type in your question in the space provided.
4. Type in the response users will see if they answer correctly.
5. Type in the response users will see if they answer incorrectly.
6. Click on the number of each extract to bring up the CD Editor window. Use this to define each extract as before, click OK, then type the answer in the space provided.

To test your Random Play, click the Selection arrow to deselect it, then click the Play button next to your question. After listening to the audio, click the correct answer (!) and your specified message will be displayed (and vice versa for an incorrect answer).

▸ Try adding a Random Play test to your exercise.

Adding graphics to a page
The Calma Editor allows you to add graphics to your exercise. These could include musical examples, diagrams, pictures, photographs etc

Graphics are either shown on the screen as part of the main text (only suitable for smaller graphics), or attached to buttons that open the graphic in a separate window (for larger ones), allowing you to have more than one linked to a page.

■   To add a graphic to a page:
1. Click the Graphics button 🖼 on the tool palette.

2. Locate your graphics file. Note that any graphics files you include in your exercise must be stored in the same directory as the related exercise file (*.cef) to enable your users to view them.

3. You will then be asked if you want the graphic to appear in the main text area, or to be shown in its own window. Choose one of these options.

4. If you click Main Text Area, the graphic will be pasted into the main text area and will be immediately visible. Click and drag the graphic to the position you want. Be careful not to position it over other objects, like buttons.

If you click Separate Window, a graphics button with its own text box will be pasted into the bottom right of the main text area. As with audio buttons, click and drag the button to the position you want, and type in a text label (if any). To view the graphic, deselect the Selection tool if it's highlighted and then click on the button to open a window showing the graphic you selected.

▶ Try adding a graphic in the main text area and as a button opening it in a separate window.

Title Page
Each exercise has a title page which provides the following information about the exercise:

• Exercise title
• Exercise aims
• CD used
• Author
• Copyright information

■   To edit this information:
1. Click the Edit Title Screen button ▤.
2. Fill in the information you want for each category, then click OK.
3. You will be asked if you wish to view the page as it will appear to the user.

Saving a File
Calma files are saved in a particular format:

• .cef is a Calma Exercise File
• .ctf is a Calma Tour File

To save the file you are working on, click the Save button 🖫, then select the drive where you would like to save the file. Give the file a name (remember this is what the user will see - Windows 3.1, for example, does not support filenames of more than 8 characters) and then click OK.

If you are referencing any graphics, wave or midi files, these must be stored in the same location as the exercise file to enable the Editor or Player programs to find them.

Remember, when you have created an exercise, send it to the Calma online database so that others can use it!

Starting a New file

To begin a new Exercise or Tour, click the New button ☐. This will clear the current exercise, so remember to save it first if you want to use it later.

Creating a Calma Tour

As mentioned above, creating a Tour is very similar to creating an exercise. The main difference is its structure and the way it uses audio.

■   To begin creating a tour:
1. Click the New button ☐ if you are already in the Editor, or select Calma Editor from the Start Menu.
2. Choose CD Tour when prompted and click OK.
3. Fill in the Title Page information as before (or leave it until later if you prefer).

Introductory Pages

An Introductory Page has no audio attached to it. It can be used to give some background information on the music, or perhaps ask a few questions about it. You can have more than one Introductory page if you like, and these can be added by clicking the Add Page button ⊞.

Tour Pages

Tour pages have audio attached to them and form the main part of a Calma Tour. To add a Tour page, click the Add New Page button. If this is the first page you are adding audio to, click No when asked if you want it to be an introductory page. All pages added from then on will automatically form part of the Tour.

You can add an Introductory Page at the beginning of the Tour later by clicking the Add Introductory Page button ⊞.

Adding audio to a Tour

Graphics, hotwords, and web links can be added in exactly the same way as with a Calma Exercise (see above). The main difference is with adding audio, which must run contiguously between pages. As an example, imagine a program note for a piece of music, where the text changes as the music progresses.

■ To add music to a Tour
1. Click the CD button
2. Choose the start point for your Tour (see above for information on using the CD Editor).
3. Choose the end point for the fist page of the Tour. This will also form the start point for the next page, and the page will turn when it is reached whilst running the Tour.
4. Click OK, then OK again.
5. Now add a new page by clicking the Add New Page button, and repeat steps 1-4 for the next section. Notice that you cannot alter the beginning of the next extract as it runs sequentially from the previous page.
6. Repeat stages 1-5 until you have completed your Tour.

Note that a Tour can span multiple contiguous tracks on the CD, so can include movements of a longer work.

Deleting a Page
The only other main difference with a Tour is if you want to delete a page. Doing this, by clicking the Delete Page button, will both remove the page and the audio reference. To avoid a gap in the Tour, the following page's start point is altered to that of the page you have deleted to preserve the continuity. Similarly, altering the end point of a page's audio will also alter that of the following page. If you insert a page between two previously defined Tour pages, the later page will have its start point moved to the end point of the inserted page.

Tips for Authors

Testing your exercise

When you have finished writing your exercise, you will need to test it on the machine students will be using.

In particular:

- Ensure that any graphics, wave, midi or *.rmi files used in your exercise are stored in the same directory on the end user's machine (or server, if using a networked lab) as your exercise file (*.cef or *.ctf).

- If you have used any unusual fonts in your exercise, you should check that these fonts exist on the end user's machine (fonts should be stored in the WINDOWS\FONTS directory).

- If you have used any web links in your exercise, these should be tested on a networked computer.

- Don't forget to take the relevant CD(s) along to check any CD extracts you defined!

Example

You have created an exercise called *mozart.cef*, and have included two graphics in that exercise (*mozart.gif* and *score.bmp*). The Calma Player has already been installed on a standalone computer for students' use, using the path:

C:\Program Files\Calma

To prevent students from editing your exercise files, you chose not to install the Calma Editor software on this machine.

You then create a separate folder for your exercise files named **Exercise**, using the path:

C:\Program Files\Calma\Exercise

and copy *test.cef, mozart.gif* and *score.bmp* into that directory. To test your exercise, open the Calma Player, locate *test.cef* and open it.

Tips for exercise writing

Integration

Integration into the curriculum is probably the single most important issue to consider when designing an exercise. Ideas for integration include:

- using worksheets for students to fill out while going through your exercise, as a basis for seminar discussion (students could do the exercises singly or in pairs, as appropriate)

- using bulletin boards as a follow-up discussion forum for issues raised in your exercises (useful for large groups)

- writing exercises for focusing practical work

- writing exercises for revision, that consolidate on work covered in lectures

- including web links in your exercise, to particularly relevant or in-house websites

User appeal and clarity

- Although obvious, choosing 'user-friendly' fonts (e.g. Comic Sans MS) can have a dramatic effect on the visual appeal of your exercise, as can font size, use of bold, italic etc and the amount of text you choose to put on one page.

- Finding relevant graphics to include can also enliven exercises (for example, including the scanned score that goes with an extract you've chosen).

- Break up your text with appropriate use of random interactive exercise objects, hotwords, extract buttons and web links (for example, getting users to click on a web link in your exercise to check a page dedicated to the composer being examined).

- As the Calma software has been designed for unsupervised study, you should give clear instructions throughout to enable students to get the most out of your exercise (e.g. aims of the exercise, what students should be listening for, what worksheets are needed for the exercise and how to use them, follow-up activities etc). Feel free to copy or adapt any of this text for you own use.

Ease of access

Enabling easy access to the software itself (e.g. installing it in a 24 hour networked lab), and to any CD(s) needed for your exercise (e.g. storing the relevant CD in the

departmental library) can make a significant difference to users' perceptions of the usability your exercise.

Some ideas for exercises

There are a number of generic types of listening exercise to which the Calma software is particularly suited. These include:

- **Comparisons**
  A number of exercises can involve comparisons of pieces, sections, or elements within a piece. Examples could include comparing performances of the same piece on authentic and modern instruments, the way a performer plays a repeated section or how interpretation changes between performers.

- **Stylistic Recognition Test**
  Use the Extract mode to create a test for individual student practise or for an examination. Either use a compilation or sampler CD (from a record company, or music magazine for example) or create your own using a CD writer (only if you have copyright clearance though!).

- **Aural Dictation**
  Use the extract mode to reference sections of a CD with suitable material for aural dictation. Answers could be made on a prepared worksheet, allowing self-assessed private study (by checking against a score) or submission as coursework. The correct answer could be provided as a graphic as part of the exercise.

- **Performance/Composition Commentary**
  If you can record student performances and compositions to CD, the student can prepare written commentaries that provide text linked to audio examples to illustrate their points (e.g. 'I attempted to use the same articulation on the phrase in both the exposition and recapitulation. As you can hear, this did not come off as successfully as I had hoped as my bowing arm was tired after a long program').

- **Analysis**
  Either use the Tour or Exercise Editor to create analytical commentaries on a piece for study. The Tour could be used to provide a dynamic commentary on the piece's key structure for example, or sections could be separated in an Exercise to compare instrumentation in a set of variations.

Have a look at some of the sample exercises provided, or download new ones from the Calma website

Troubleshooting

Error Messages

"Cannot find file "calma.bmp"

The Calma Background file has not been stored in the correct directory (i.e. the same directory as the Calma Player file), so the background will be shown as grey.

"Cannot find file <name of graphics file>. All relevant graphic files need to be located in the same directory as the Calma Player i.e. <path of Calma Player>."

If the author of the exercise or tour file included graphics, these should be stored in the same directory as the relevant (*.cef) or (*.ctf) file. If the Calma Player is unable to locate these graphics, you will get the above error message.

"Another program is using your CD drive. You need to exit that program and then click 'OK'."

If you have been listening to CDs using another program, for example the Windows CD Player, the Calma Player will not be able to access the CD. Follow the instructions in the dialogue box to continue.

"You do not appear to have a CD inserted. Either insert a CD and click 'Retry' or click 'Cancel' to try later."

This message appears if you haven't got a CD inserted into the drive, or if you have just inserted one and the CD Player is busy reading that CD.

"You do not appear to have the correct CD inserted."

Calma Exercise files specify extracts from specific CDs. If you get this error message, make sure you have the correct recording for the exercise (which may have been specified by the author on the title page).

Miscellaneous Errors

The Loop facility may not always work properly if you are using a slow computer or the computer is busy on another task.

You may get error messages or anomalies if you adjust the CD volume control (using the Windows CD Player, for example) while using the CD controls in the Calma Player. These will work properly once the other application is closed.

If unusual characters (such as bullets) are copied from another application (e.g. Word), there may be anomalies in what is pasted into the Calma Editor packages.

About the Website

▶ **http://www.hud.ac.uk/calma.html**

The Calma website contains current information on the project, as well as the latest version of the software and sample exercise files. Remember to visit it occasionally to check that you have the latest versions. Anyone joining the mailing list will be informed of any updates.

The website contains a lot of the information found in this manual, with the following additional sections:

- Downloads
- Mailbase
- News
- Contacts and web links

Downloads

The downloads section contains all the latest files, including the Calma program files, exercises, graphics and worksheets. It also has the latest version of this manual.

- If you have not installed the Calma software before, you need to download the full program which is a file called **calma.exe**. This is about 4.4Mb in size.

- If you have installed the software but want an updated version, you can simply download the new program files as a zipped archive. This will be a file called **Calma_v1.2.zip** (or the number of the latest version if later than v1.2). This archive is normally about 1.1Mb.

- Additionally, you can download all of the exercise files as an archive called **Calma_filesv1.2.zip** (or the number of the latest version if later than v1.2), or individually by clicking on their name.

If you have written an Exercise or Tour which you think others would like to use, please email it to us and we will place it on the site. One of our hopes is that we can build an archive which staff and students can benefit through sharing learning materials and approaches. Our email address is:

▶ **calma@hud.ac.uk**

Mailbase

We have set up a Calma mailing list which will provide news on the project and act as a discussion forum for software users.

To join the list, send an email message to mailbase@mailbase.ac.uk with this command in the body of the message:

> join calma firstname lastname

where firstname and lastname are your own personal names. Do not put anything in the subject box or any extra text (e.g. a signature) in the main text.

For full information about the list, please see the website.

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