hyperceive™

save disabled demonstration
user manual and reference

This manual is taken from the complete user's manual of the retail version of Hyperceive. The sections on Saving and Publishing have been left in for information purposes. You may experience some other differences between the demonstration version of hyperceive and the information contained in this manual.

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Getting started

2.1 Introduction

This overview is designed to take you through the basic functions of Hyperceive. To start you will need to:

1 successfully install your copy of Hyperceive
2 have your audio files prepared as 8 kHz, 8 bit mono Next/Sun **.au** files (see chapter 4)
3 place the audio files in a specific directory
4 open Hyperceive by double clicking on the icon (left).

2.2 The player

Fig 2.1

The basic player functions are similar to those found on a CD player. Figure 2.1 shows from left to right:

- Scroll to start of arrangement
- Scroll to end of arrangement
- Freeze playback to this point
- Play the arrangement from a selected point
- Stop the playback
- Play the arrangement from the beginning
- Pause the playback
- Rewind the arrangement
- Fast forward the arrangement

2.3 Inserting your tracks

Open the **File** menu on the menu bar and select **New** to create a new song or click the **New Song** icon.

Click the right mouse button in the box beside the number 1 under **System Track**. Select **Insert Track** from the menu (Fig 2.2). This will open a dialog box from which you can select the desired file from the directory in
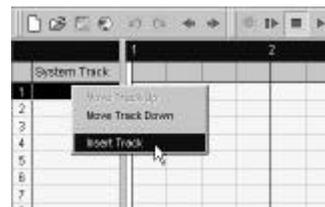
Fig 2.2

which you have saved your **.au** files. Highlight the first file for selection and click on **Open** (Fig 2.3).

The file selected (CLASSICAL1.au) appears in box 1 of the **Track list**, and is now ready to be inserted into the sequencing space denoted by bar lines and beat measures (Fig 2.4).

Fig 2.3

Double click on the beat position (the space between the vertical lines) where you wish to place your first audio file. A blue line appears, representing the complete file. In Fig 2.5 the file has been inserted into beats 1 and 3.
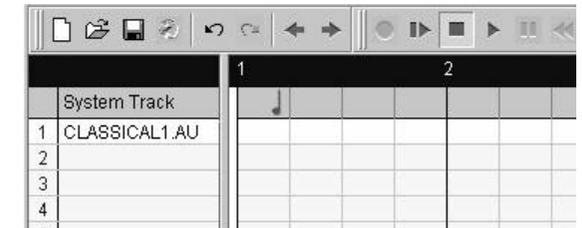
Fig 2.4 beat measure bar line

Fig 2.5

Now simply hit the **Play** icon and listen!

As you will see, you can place this file anywhere along its sequencing space that you wish. You are now ready to add your second file. Click on the right mouse button immediately below the first track and you can choose a second file from your audio directory. Add your files in the order in which they will be played.

2.4 Adjusting track options

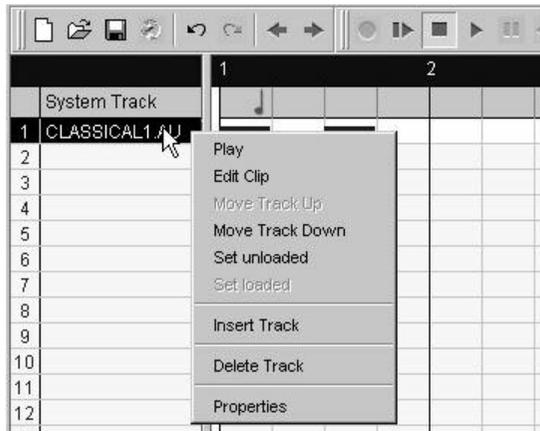By clicking the right mouse button on the audio track name, various options are available. These are shown in Fig 2.6.

Edit Clip will automatically load this sound file into the audio editing software of your choice, assigned in the **Preferences** section within the **File** menu (Fig 2.7). This can also be activated by double clicking on the audio track name, allowing adjustments of the file to be made.

Fig 2.6

In this case, **Cool Edit**™ has been selected as the audio editing application. It is shareware and can be found on your Hyperceive installation CD, but please register your copy of Cool Edit™ with Syntrillium.

Set unloaded places a cross next to the audio track name and effectively turns the track off. This has more relevant use in conjunction with the modem simulator, which we shall look at later in this chapter.
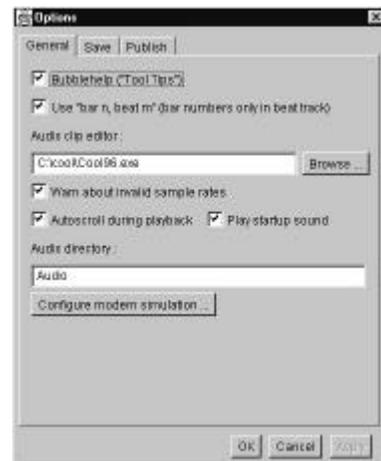

Fig 2.7

Properties (Fig 2.8), allows you to rename your audio file or to replace it with an alternative file, selected through the **Browse** option.

You can give your file a name which corresponds to its sound content for easy recognition in the track list.

The remaining options from this right-click selection are self-explanatory. A full list and explanations can be found in Chapter 3.

Fig 2.8

2.5 Arranging your tracks

We shall now start to look at the features of Hyperceive which give control and variation to your arrangement.

Hyperceive will play back your arrangement at the playback speed set in the properties of a **Beat Length**. A musical note situated in the **System Track** at the top of the sequencing window shows that a beat length has been set. To find out the value of the beat length, access the **Beat Length Properties** dialog by right-clicking the musical note (Fig 2.9) and selecting **Properties** from the drop-down menu (Fig 2.10).
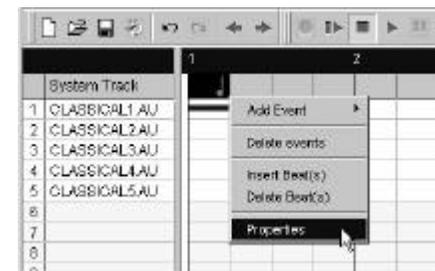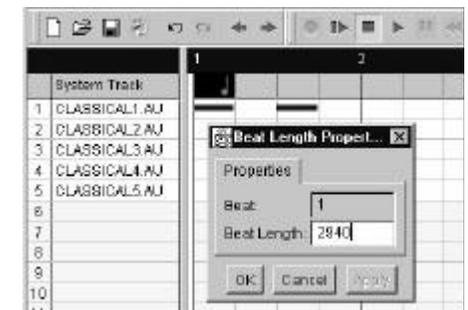

Fig 2.9   **Fig 2.10**

A beat length is a time value in milliseconds. Hyperceive will initially adopt a value that corresponds to the length in milliseconds of the **first** file to be inserted. The beat length dictates the speed at which the editor plays the sequence and is visually marked as the space between the vertical lines in the main sequencing window. Therefore in Fig 2.10 the first track has a beat length of 2940 milliseconds, and the space between each vertical line in the main sequencing window represents 2940 milliseconds.

The value in milliseconds of the beat length can be adjusted by changing the value in the **Beat Length Properties** dialog (Fig 2.10).

As an example of choosing an appropriate beat length, place a succession of instances of the same inserted audio file to create a back to back arrangement (Fig 2.11). If the beat length is correct, the files will play smoothly from one to the next, giving the impression of looping.
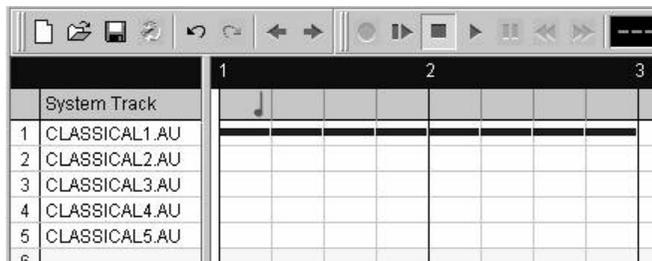

Fig 2.11

The correct time value to produce a smooth loop is normally slightly less than the actual length in milliseconds of the file. This allows each instance of the file to flow into the next without jumping. In the case of the *CLASSICAL1.AU* file in Fig 2.11, the beat length was reduced from 2940ms to 2400ms.

Once you have arrived at the correct time value, you can create time fractions by reducing the beat length value by a particular amount, say 1/2 or 1/4.

In the example shown in Fig 2.12, the time value of the beat length has been reduced from 2940ms, as seen in Fig 2.10, to 735ms, which is a quarter of the original value(Fig 2.12). This means that each beat is now a quarter of the length of the file, so the sound file stretches over four beat spaces rather than just one. Now other files can be placed in an off-beat arrangement relative to *CLASSICAL1.AU*. This allows you to control more accurately how tracks are synchronised with one another.

Fig 2.12

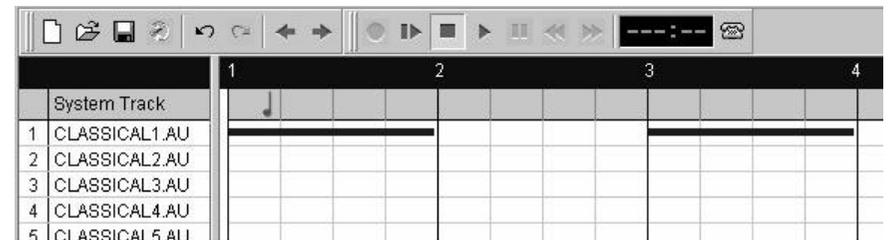**Note**: having adjusted the beat length, you may have to reinsert your files to fit the new beat arrangement; otherwise they may overlap.

Further events can be added to occur at certain times throughout your arrangement. A list of the available events pops up on a click of the right mouse button at the place of your choice along the shaded bar of the **System Track** (Fig 2.13).
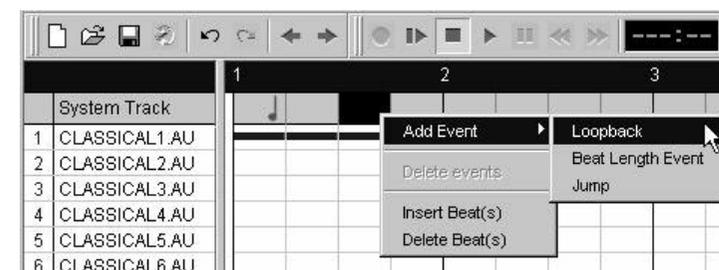

Fig 2.13

Each event is represented by its own icon, and can be placed as many times as you choose. The available events are:

2.5.1 Loopback Points

A loopback point can be placed anywhere in the arrangement that represents a suitable point to return to in the event of the next file not having downloaded to the end user s machine in time. Sensible placement of loopback points enables a continuous flow of sound should it be required.

2.5.2 Beat Length Events

The beat length is the time value in milliseconds of your sound file. So for instance, a drum loop with a total length of 2000ms will have a beat length of approximately 2000ms. The beat length dictates the speed at which the editor plays the sequence. By inserting a new beat length event (Figs 2.9 and 2.10) into your arrangement at different points, loops of varying tempos can be used.

2.5.3 Unconditional Jumps

Unconditional **Jump** events are repeat points separated by up and down arrows. These arrows can be placed wherever you wish a section to repeat in a continuous loop. Similarly with all these events, click the right mouse button on the icon and select the **Properties** option where the arrows can be positioned (Fig 2.14). In this case the song will jump from beat 15 to beat 5 and start a continuous loop between those beats.

Fig 2.14

Also triggered by the right click are the **Insert beats** and **Delete beats** options. These provide a facility for lengthening or shortening your arrangement. The number of beats is

entered in the box, as seen in Fig 2.15. The new beats are inserted **before** the selected beat.

Fig 2.15

Delete beats will delete all selected beats.

2.6 Adjusting track playback

By now, you should be familiar with the idea of how the horizontal blue bars represent the audio files of your arrangement. We shall now look at some of the functions that effect this layout.

We have already inserted tracks in the sequence by double clicking within the desired beat space (section 2.3). Figure 2.16 shows another way of achieving this.
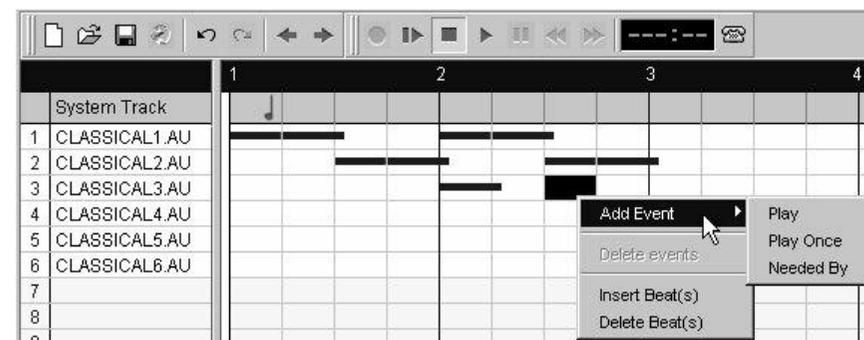

Fig 2.16

A click on the right mouse button within a beat space will reveal a pull-down box offering the following alternatives:

1 Play
2 Play Once
3 Needed By

2.6.1 Play

Play inserts an instance of a file within the sequence in the same way as a double click.

2.6.2 Play Once

This option will insert a pale blue bar into the sequencing window to represent an audio file that will not be repeated in the event of a loopback. This is especially useful for voice files such as welcome messages which would sound unusual if repeated.

2.6.3 Needed By

By placing the **Needed by** icon ahead of an audio file position, you can instruct the player to return from the **Needed by** triangle to the last loopback point until any files flagged as **Needed by** have downloaded (Fig 2.17). This is especially useful for guaranteeing that audio files will play together, and can be likened to pre-fetching audio files.
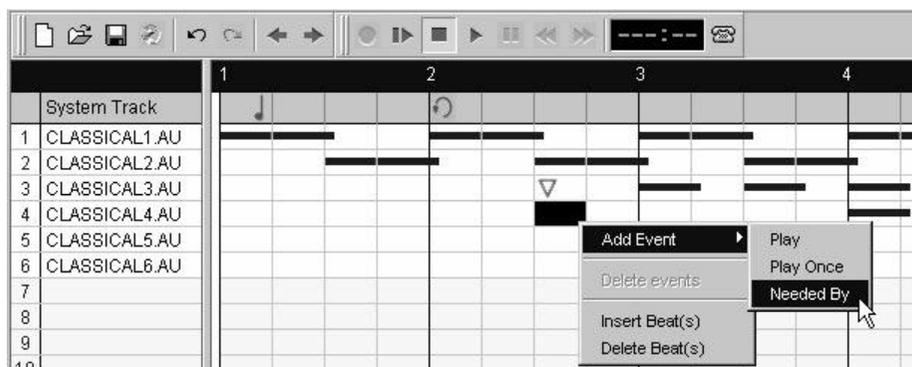
Fig 2.17

Figure 2.17 shows **Needed by** placements for *CLASSICAL3* and the insertion of another **Needed by** for *CLASSICAL4*.

Note that the **Needed by** triangles are at the same beat position (beat 3 of bar 2). This is telling the player that both files must have downloaded and be ready by that point. If not, the player loops back from the **Needed by** triangles to the loopback point at beat 1 of bar 2 until both *CLASSICAL3* and *CLASSICAL4* have downloaded, allowing the two files to play together.

The **Needed by** option also enables the controlling of loopback to suitable points to retain the musical sense of an arrangement, even over a slow Internet connection (Fig 2.18).

Placing a **Needed by** event as seen in Fig 2.18 will make the arrangement jump back from beat 1 of bar 6 to the loopback point at beat 1 of bar 5. The composer has decided that this makes a more musically ideal loop arrangement than to have the player jump back from beat 4 of bar 5. The player will only jump back if Track 6 has not downloaded by the time the **Needed by** triangle is reached.
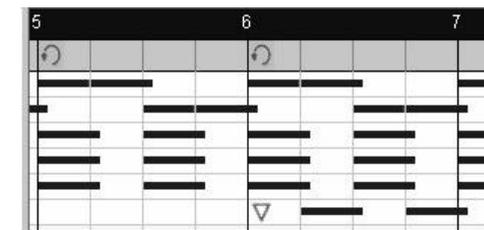
Fig 2.18

By clicking with the right mouse button on an inserted audio play event, the drop down box shown in Fig 2.19 will appear.

Here we have the option to shorten or lengthen a play event around the **Crop to here** option. Cropping the play event will reduce its length to the position of the selected beat. This can be used to tighten the sound of a file or to instruct the player to reproduce only part of a file such as the first two beats in a drum loop.
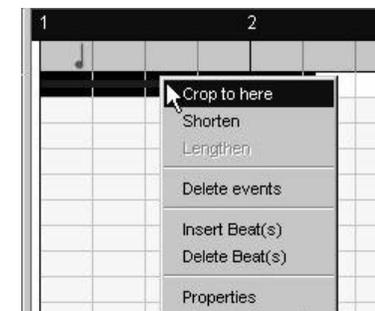
Fig 2.19

2.7 Modem simulation

The modem simulation function is designed to imitate the download behaviour of a modem. This function is controlled from the telephone icon and is particularly useful for testing the viability of your arrangement and the correct placement of **Loopback** points and **Needed by** placements.

Figure 2.20 shows how, with a right click on the modem simulator icon, you can select the modem speed that you wish to imitate. You can also configure the modem simulator in the **General Preferences**. Please note that the modem simulator has been designed to represent a graphically heavy site, and throughput is therefore assumed to be slow.
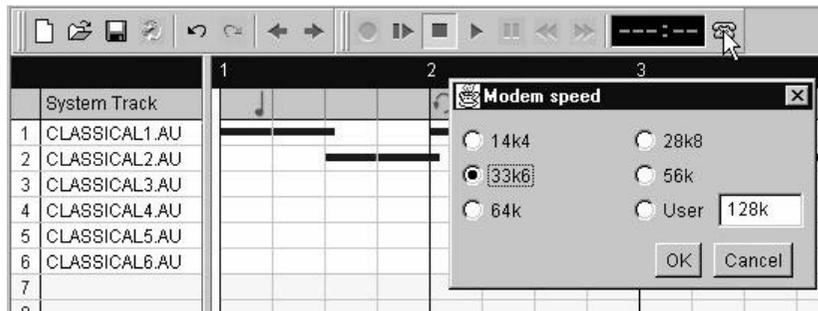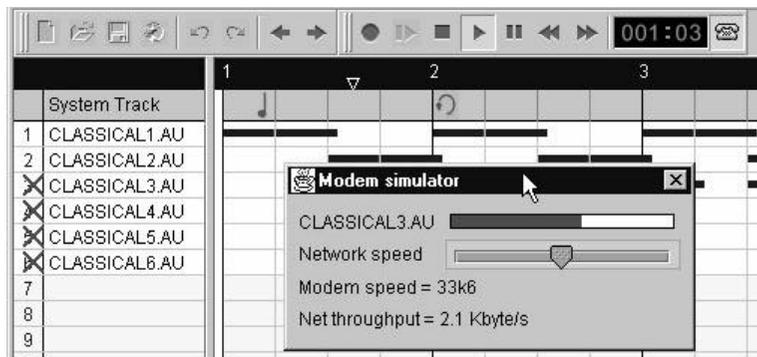

Fig 2.20

Fig 2.21

Once you have selected the appropriate modem speed, simply click on the modem icon to activate it (the icon will depress) and press **play**.

At this point, the audio files will be set as unloaded, unless they have been set **preloaded** (see section 3.4). A box will appear, illustrating the Net throughput in kilobytes per second (Fig 2.21). This throughput value is adjustable for testing your arrangement under varying simulated Internet performances.

2.8 Saving and publishing

Before we look at the publishing function of Hyperceive, we shall briefly consider the everyday functions such as **Save**.

Fig 2.22 shows from left to right:

- New song
- Open an existing song
- Save a song
- Publish a song
- Undo an action
- Redo an undone action
- Scroll to beginning of song
- Scroll to end of song

Fig 2.22

Throughout the process of building a song, it is essential to save your work frequently. The Hyperceive file format we use for saving the sequences has the extension **.hyp**. This format is unique to Hyperceive, and has been specially designed to work within HTML.

On saving your work you will be asked whether you want to **copy** the audio files, or **reference** them. **Copy** makes sure that all the audio files you have used in your arrangement are copied to your audio directory (creating the directory if it doesn t exist). **Reference** will not make copies of the files; Hyperceive will expect you to save your files to the right location so that they can be found later.

Finally, the time will come to publish your arrangement as an HTML page, ready for putting onto the World Wide Web.

The publishing process couldn't be simpler. The first step is to decide on a name for the example HTML document which Hyperceive produces when you publish your arrangement. Enter this name in the box marked **Leafname of example HTML file** in the **Publish Preferences** section (under **Preferences** in the **File** menu). The default name for the file is *Example.html*. You should also make sure that the two boxes marked **Save example HTML file** and **Always overwrite example HTML file** are ticked (Fig 2.23).
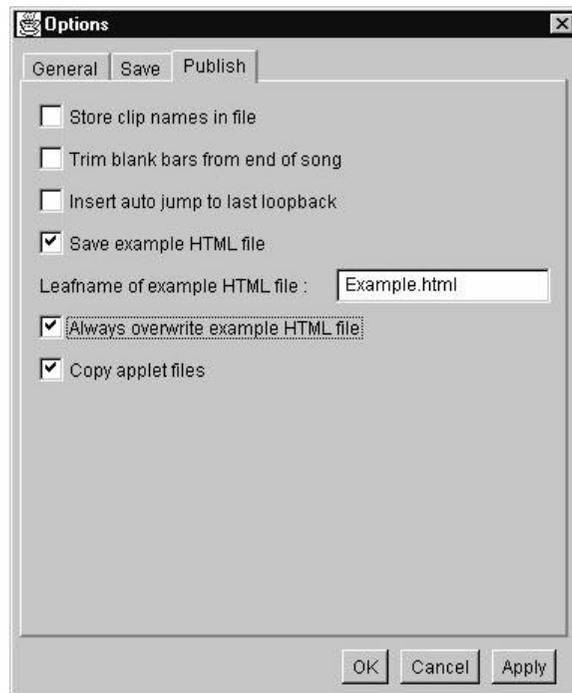

Fig 2.23

Now just hit the publish icon, agree to the overwriting of the **.hyp** file and you will publish an HTML page, complete with all your audio ingredients, ready for the Web.

Figure 2.24 shows the section of the sample HTML page which contains all the relevant applet tags. In this case the player will look for the audio files in a directory called *audio*, and the Hyperceive **.hyp** arrangement is called *Mysong.hyp*. These names will change for each arrangement you publish, depending on what names you have given your audio directory and **.hyp** file. Cut and paste this section into the page on which you wish the sound to appear, or use the sample page as the basis for a new page.

```
<Hyperceive playback system (c) Copyright Insigma technologies Ltd. 1998 -->
<APPLET CODE="Hyperceive.class" WIDTH=2 HEIGHT=2>
    <PARAM NAME="audiobase" VALUE="audio">
    <PARAM NAME="songfile" VALUE="Mysong.hyp">
    <PARAM NAME="colour" VALUE="0,0,0">
</APPLET>
```

Fig 2.24

Other items you will require in conjunction with this page on your server are:

- The Audio directory, complete with the audio files from your arrangement.
- The applet files, which will be copied to your local directory by the publishing option of the editor (ensure the **Copy applet files** option is ticked in the preferences section, see Fig 2.23). These files are:
    Hyperceive.class
    IMPSBase.class
    IMPSClip.class
    IMPSPlayer.class
    IMPSPlayListener.class
- The **.hyp** file that you have created using Hyperceive (which contains the sequencing information).

Fig 2.25

Figure 2.25 shows a folder with all the necessary files in place to play an arrangement called *Mysong.hyp* on a Web page called *Mypage.html*.

2.9 Incorporating your work into your site

For the purposes of this overview, we shall look at the two most straightforward methods of incorporating your arrangement into your Web site.

1 Placing the applet information into the HTML of individual pages.
2 Placing the applet information into its own HTML page to sit within a persisting frame of a frameset.

Page by page your Web site can deliver different audio messages. By creating a separate **.hyp** file for each page in your site, you can make the sound change from page to page.

Alternatively, it is often the case that a site will have continuous sound running throughout. To achieve this is slightly more complicated but the results are great, with endless audio content continuing regardless of where you may navigate through the site.

Fig 2.26 shows the HTML for a frameset containing a page called *sound.html*. This is the persisting frame that holds the applets and sequencing information, and it is sized to zero so that it is invisible and does not interfere with the layout of the frames.

```
<HTML>
<HEAD>
<TITLE>hyperceive demonstration pages</TITLE>
</HEAD>

<FRAMESET COLS="0,177,*," FRAMEBORDER="yes" BORDER="0" FRAMESPACING="0">
        <FRAME SRC="sound.html" SCROLLING="auto" RESIZE="no">
        <FRAME SRC="navbar.html" SCROLLING="no" RESIZE="no">
        <FRAME SRC="home.html" SCROLLING="auto" RESIZE="no" NAME="main">

</FRAMESET>
</HTML>
```

Fig 2.26

In this example, *navbar.html* would be the navigation or menu bar frame from which the site can be navigated. *home.html* would be the main introduction page (this would also be the frame where the other pages in the site would appear as they were called up via the navigation bar).

If *sound.html* holds the relevant applet tags for the desired audio content (see Fig. 2.24), the sound will continue throughout the site, regardless of which page is visited.

You can combine these two techniques and have, for example, a music sequence held in the persistent frame, and voices and/or sound effects for each individual page within the site. This way the music would provide a continuous backing track, and you could tailor the audio content of each page to suit its needs.