Rhapsody 4

Requires RISC OS 3.1 or later

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Published by

APDL ProAction

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1. Introduction

Rhapsody 4 is a powerful music composition and transcription tool for Acorn RISC OS machines. Using Rhapsody 4 you can create and manipulate complex musical scores, play music on or record from a MIDI instrument (with support for General MIDI) and produce a high quality printout of all or part of the music.

Rhapsody 4 has been substantially re-coded since the release of Rhapsody 3 to allow for increased flexibility, but care has been taken to keep the user interface easy to use and broadly consistent with earlier releases so that new users, as well as those experienced with previous releases of Rhapsody, can quickly create their own music.

Rhapsody 4 requires RISC OS 3.1 or later plus 4MB of RAM and we recommend a machine fitted with at least ARM 3 in order to obtain satisfactory performance.

We do not recommend Rhapsody 4 for use with A300, 400, 3000, 3010, 3020 or A4000 computers. It will work on these computers but it may be slow.

Font cache

Ensure that you have an adequate font cache configured. If the Rhapsody screen update is slow then you probably need to assign a larger font cache using !Configure, or press F12 and type *CONFIGURE FontSize 256k

Typographic conventions

- Special terms or jargon appear in italics when first introduced: *'Bank numbers...'*
- Instructions to press a key on the keyboard, or a mouse button, are shown in fixed width font eg Return. This means press the Return key on the keyboard.
- Menu options that may be selected are in sans-serif font: 'Click on Print to... ' means choose the option called Print from a menu.
- Menu options which lead to sub-menus have an arrow after them: Stave ▶
- Options in dialogue boxes or options in windows are in sans-serif font: Cancel
- Something important always appears **in bold.**
- Worked examples have italicised headings: "*Example...*"
- Separate points, or different ways of doing the same thing, are bulleted: ● ● ●.
- Actions which should be performed in order are bulleted with numbers: ❶ ❷ ❸.

Conventions used in this guide

We use the standard Acorn conventions for the mouse buttons:

Select　　is the left button, and the most commonly used.
Menu　　　is the middle button and is used primarily for opening menus.
Adjust　　is the right mouse button.

Unless otherwise stated, **Choose** means move over something and click on it with Select or Adjust.

Inserting a disc into the floppy disc drive and clicking on the disc drive icon is known as *mounting the disc*. The disc's *directory display* appears after you perform this operation.

Error or message dialogue boxes may appear from time to time. When they contain two action icons (coloured cream) clicking OK will continue with the operation. CANCEL will abort it.

It is assumed that you have read the Welcome Guide supplied with your computer and are familiar with the RISC OS Desktop environment.

The Future

The product you hold in your hands is 'finished' to the extent that it contains no known bugs. However, we have plans for enhancements to this software. If you have any constructive criticism or advice then it will be most welcome. Please send any such ideas or requests in writing to Clares via post or email.

ReadMe

A file called ReadMe is supplied on the disc. This gives up to date information that has arisen since this manual was printed. The file is in text format and should be loaded into Edit, which is supplied with your computer.

Initialising Your Program Disc

You must initialise your disc before installing the software. You cannot backup this disc.

The first time that you catalogue the Rhapsody disc you are required to go through an initialising procedure. A box pops up asking you to enter your name and address details. When you have entered these correctly the program is initialised and the disc is automatically installed. Each single user version is supplied with two credits that allow two installations of the program. One should be kept as a

---

backup. The application can be de-installed to regain a credit by running the installer and dragging the application icon onto the installer window.

Note: The details that you enter into the box will be shown each time you run the program but the box then disappears once a certain action is carried out within the program, or a time has elapsed. It is important that you enter the correct details when initialising your disc as we will only return discs or provide upgrades to the address given on the disc. If you return a disc to us for any reason we will automatically read off the details from the disc and return it to the specified address.

Hard disc installation

This is done using the Installer by dragging the Rhapsody 4 icon from the Installer window into the relevant directory viewer. All associated files are automatically installed for you.

If you wish to use Rhapsody 4 in conjunction with other programs it may be sensible to have all of these applications in the same directory, or available on the Pinboard.

!R4Convert

This application will convert Rhapsody 3 files to Rhapsody 4 format. When the application is run you click on the icon bar icon to open a window. Create a new directory to hold your converted files and drag it to the top writable icon in the window. Now drag the files or directories to be converted onto the middle section of the window and click on OK.

Rhapsody 4 files contain a lot more data and so are larger than Rhapsody 3 files. Make sure that you have enough space on your disc to store the new files.

BubbleHelp

BubbleHelp is a utility by David Pilling. It is similar to the Acorn !Help utility but is a lot more friendly and easier to use. To use it double click on the icon. It can be toggled on and off by clicking on the icon bar icon on the right of the icon bar.

PlayMidi

PlayMidi is a simple MIDI file player. See the Help file for more information. Please note that this application is a give away and is not supported.

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2. Getting started

What do I need?

To run Rhapsody 4 you need an Acorn machine fitted with RISC OS 3.1 or above and a minimum of 4 megabytes of RAM. However, we do advise a minimum configuration of an ARM 3 machine or A7000, A7000+ or RiscPC. Whilst Rhapsody 4 will run on earlier machines you **may** find the speed too slow due to the use of high quality anti aliased fonts for displaying the music. At least one reviewer has said that he finds Rhapsody 4 acceptable on an A3000.

Short Tutorials

To get you into Rhapsody as quickly as possible, this chapter will tell you how to

● load and play an existing score
● create a new score
● add notes to an existing score
● add a new stave
● save a score.

Chapter 3 will show you how to

● copy and edit whole blocks
● enter music directly from a MIDI keyboard
● add lyrics and other marks to your score
● print out the finished score

Loading and playing an existing score

Run Rhapsody 4 by double clicking on the !Rhapsody4 icon in the directory display. The Rhapsody 4 icon will then appear on the icon bar. To open a new score window click on the icon with Select. Adjust opens just the Main Panel.

Once you have loaded Rhapsody, you can load in a score by dragging its icon from a Filer window onto the Rhapsody icon on the icon bar, or onto a score window.

For now, try loading in one of the new demonstration files supplied on the Rhapsody 4 disc. The score will appear in a new window if you dragged the file onto the iconbar icon; otherwise, it will appear in the score window you dragged the file onto. If this window contains a (non-blank) score already you are asked if you want to overwrite it.

Now you have a tune, you can play it. Click anywhere in the score with the Menu button and select Play from... ♦ Start. Rhapsody checks to see if you have a MIDI interface fitted, and if you have, plays the score through it; otherwise, it will use the computer's internal sound system.

The sample scores provided on the Rhapsody 4 disc have been set up to conform to General MIDI; if you have an instrument compatible with this standard you will be able to hear these scores played on the correct instruments and create new scores using the instrument names provided.

If your MIDI instrument does not support General MIDI, you may need to change the voice numbers on the staves to make it sound right, and Rhapsody will not get the instrument names in its windows right until you tell it how the different voices in your instrument are laid out. For further information see these sections:

● altering a stave - page 102.
● customizing Rhapsody to cope with your setup - page 137.

Creating a new score

In this tutorial we shall input and edit a simple tune. The example used here is an old folk song, but you can put in any tune you like.

If Rhapsody is not already running, load it as above and bring up a new score window by clicking on the icon bar. A window like this appears:
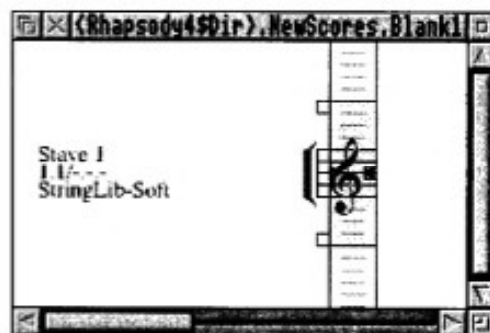
To begin with, the score contains nothing but a treble clef, on a single stave. The yellow box is called the **cursor** and this is where all editing is done. On the left of the stave some useful information about the stave is listed including its name, MIDI channel information and the name of any internal voice associated with the stave.

In addition to the score window, the **main panel** appears as well. Let's pause a minute and have a look at what it offers.
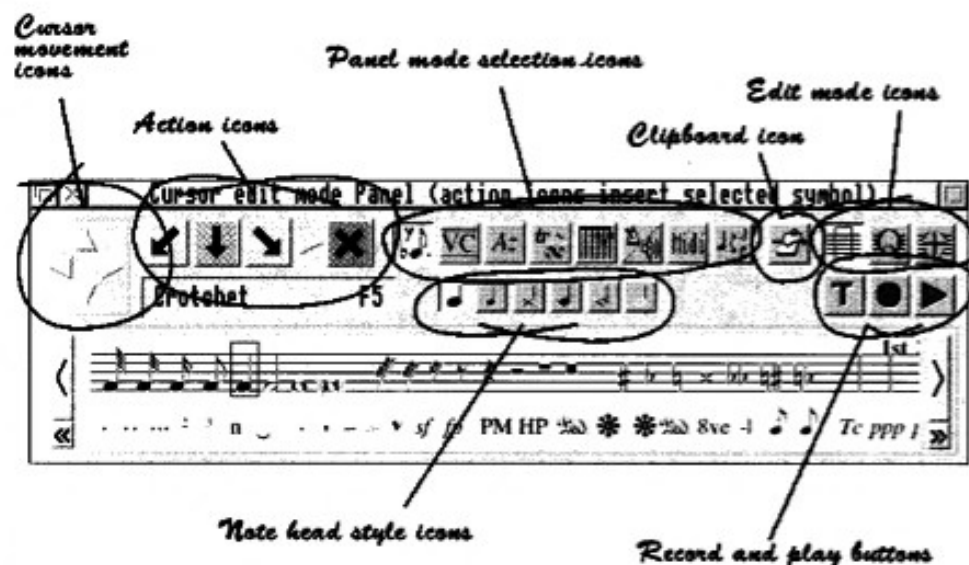
On the left at the top are four arrow icons which move the cursor left and right and also move the red arrows up and down.

On a blank score, you can move the arrows up and down but the cursor will not move left or right because there is nowhere for it to go. Try it. Naturally, the cursor keys on the computer keyboard do the same thing.

Next along is a group of coloured keys which enable you to enter and delete symbols in a score.

We shall be using these a lot.

The third group controls what appears in the lower half of the panel. Make sure that the leftmost icon is selected - the one that selects all the notes, rests and all the other musical symbols.

On the right hand side are three buttons which corresponds to a different mode, or style of editing. In this tutorial we shall use *Cursor edit mode*. This is the default state of affairs, and if you are using Rhapsody 4 for the first time the panel should be in this mode already. (The current mode is shown on the title bar as well as being reflected in the buttons.)

Tucked in between these two groups of icons is the clipboard icon, but we shall not be needing this yet.

Underneath the edit mode buttons are the Transcribe, Record and Play buttons.

and to the left of them, a group of note head style icons

Most importantly of all, of course, is the display of musical symbols in the lower half of the panel. This contains nearly 200 symbols and it is not possible to show them all at once so this part of the window is scrollable. At the ends of the window are two sets of button icons shown below:

If you press and hold the Select button over one of the larger upper icons, the window scrolls smoothly in the direction of the arrow. To move the window a 'page' at a time, click on one of the small buttons at the bottom. In both cases pressing the Adjust button scrolls the window in the opposite direction. Another way to scroll the window is simply to drag it using the Select button. (Press the Select button while the pointer is anywhere in the window and hold it down while you drag the mouse, and the window, from side to side.) In fact, if you release the button while the mouse is moving, the window carries on scrolling for a while so you can 'throw' it from one end to the other when you get skilled at it!

Now we are ready to enter some music.

Entering musical symbols

The tune is a very simple one called 'To A Wild Rose' by MacDowell. Here are the first four bars.

It is in the key of F major and so the first thing to do is to add an appropriate key signature. (We shall add the bass stave later)

Key signatures are not required very often except at the start of a piece so they will be found towards the right hand end of the symbols window. F major has one flat so this is the symbol that we need. Click on it and it will be highlighted in yellow.

(If you want to select a key but you do not know how many sharps or flats it has in it, you can simply press the appropriate letter on the computer keyboard. If the key is too complicated eg Eb minor, you can try each key signature in turn until the right name appears in the information window below the action icons)

To insert the key signature into the score, click on the Insert-After button.

What this does is to insert the selected symbol into a new slot immediately to the right of the cursor. You will often need this button when entering the first stave of a blank score. It has a keyboard shortcut - the full stop key (which also has a > sign on it to remind you that the cursor moves one slot to the right.)

This tune is in 2/4 time, so the next thing we need to do is to enter a time signature. The time signatures are at the very end of the symbols window. Click on the 2/4 time signature and then click the Insert-After button again.

This is what your score should look like now:
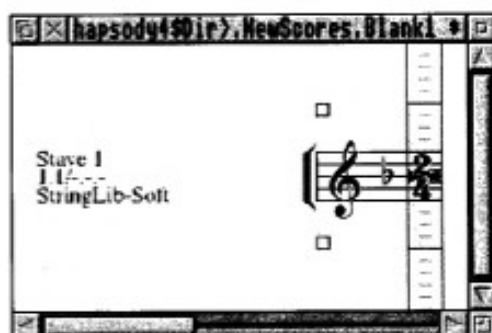
To enter the notes of our tune, you need to add them one at a time to the end of the score. First, move the symbols window back to the left hand side so you can see all the notes. Click on the quaver symbol (...or you could press F4). Now you need to make sure that the red arrows are on the right line of the stave. If they are not on the second space up (an A) move them either with the cursor movement icons in the top left hand corner of the panel (...or with the cursor keys on the computer keyboard). When they are correct, click on the Insert-After button (...or press the full stop key). The next note is also a quaver so move the cursor up two notches and insert again. The next note is a crotchet, so select a crotchet (...or press F5) and insert again. This time, Rhapsody will recognise that the bar is full and automatically put the barline in for you.

Carry on in this way, selecting, moving the cursor and inserting until the line is complete. Try using the keyboard short cuts as well as the mouse. This is what you are aiming for:

If you find that you have made a mistake, you may want to delete a note. To do this, place the cursor over the note in question and click on the Delete button:

(The keyboard short cut for this is the slash key - which also carries a ? mark). Note that the red arrows do not actually have to be on the note you want to delete. Rhapsody deletes the *nearest* note - so if there is only one note on the stave, it doesn't matter where the red arrows are. (Note that when deleting a symbol, you should in general select the *type* of symbol that you want to delete first eg any note or any rest. This is to avoid ambiguity. If Rhapsody can't guess what you want to delete, it will beep at you.). To reinsert the note, select the right note value - crotchet or quaver, as before - and then click on the Insert-At button:

(The short cut for this button is the Space Bar)

Instead of deleting a note, you can also *drag* it. Point exactly at the note you want to drag and hold down the Select button for a second and a red note head will appear. Carefully move it up or down to the correct position and let go. Notes (and indeed just about anything else) can be moved (using the Select button) or copied (using the Adjust button) anywhere in a score - even into another score if you want.

Adding a new stave

Now we need to add a new stave. What is more, the new stave must be **underneath** the first one. Click on the score **somewhere underneath the first stave** using the Menu button. Then choose Stave "" ▶ Add stave from the menu as shown below.

Now the score will look like this:

You will notice that Rhapsody has guessed that you need a bass clef. It will normally give you a treble clef unless you ask for an extra stave at the very bottom of the score. Of course, you could always change the clef if you wanted to. It has also copied the key signature and time signature from the stave above.

Adding notes to an existing score

Adding notes into an already existing score is a little bit different from adding notes to the end because the slots into which the notes must go already exist. First put the cursor on the new stave at the correct position (the second line down) and select the minim symbol (or press F6). Now click with the Insert-At button using the Adjust button on the mouse.

This will insert a minim with a **down** stem **without moving the cursor**. Note that if you had used the Insert-After button, Rhapsody would have pushed all the subsequent notes along which is not what we want. Using the Adjust button instead of Select inserts a down stem instead of an up stem.

Move the red arrows up to the next line and click Insert-At again. Add the third minim in the same way. Now move the cursor to the beginning of the next bar and add the next chord. The other chords can be added in exactly the same way. The last chord has an accidental in it - a B natural. Enter the notes (3 minims) first without the accidental, then select the right symbol (a natural sign in this case) in the symbols window (or press Ctrl-F3) and click on Insert At with Select.

Playing a score

Now that the first four bars are complete, you can play it. Put the cursor at the start of the score and click on the Play button on the main panel (or press Ctrl-P).


Alternatively choose Play from ◆ Start on the main menu, as before.

Since you have not set any other options for this stave, Rhapsody will play it through MIDI port 1, channel 1 if you have a MIDI card (make sure your instrument is for the moment set up to receive on channel 1); otherwise, it will use the computer's internal sound system.

You will probably agree that the score plays far too quickly. This is because we have not yet entered a tempo command. To do this we need to change the panel mode by clicking on the tempo/volume select icon.

This changes the lower half of the panel to look something like this.
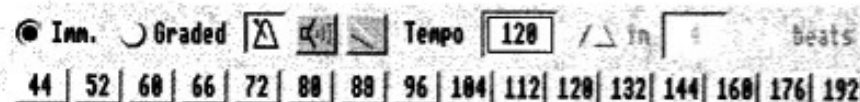
Make sure that the 'Imm.(ediate)' option and the Metronome buttons are selected. Click on the '72' button. This sets the tempo to 72 crotchets per minute.

Now put the cursor at the very beginning of the score (ie click over the treble clef).

Finally, click on the Insert-At button. When you play the score now, it will play at the right tempo.

Saving a score

You can save your work by following Score ◆ Save ◆ on the main menu; choose a suitable file name and drag it into a Filer window as normal.

In the next chapter we shall look at some other ways of entering and editing your score and we shall use them to enter the rest of the piece.

Note: Unfortunately Rhapsody needs to use all the function keys to provide keyboard input. This means that F3 is **not** available for bringing up the Save box. Much

discussion went into this decision and although it contravenes Acorn guidelines we came to the conclusion that it was more important to maintain consistency in the selection of notes.

3. Next steps

So far we have entered the first four bars of the piece, 'To a Wild Rose'. Here is the complete piece of music we want to enter.

See if you can enter the next four bars using the mouse and the keyboard. If you are beginning a new session, you will need to double click on the file that you saved. This will start Rhapsody and load the file but it will not bring up the Main Panel. To do this, either choose Show main panel from the icon bar menu or put the cursor in the score and then press the TAB key on the computer keyboard or click on the Rhapsody 4 iconbar icon with Adjust.

Now to start entering more notes. First put the cursor at the end of the score on the upper stave. Use the cursor movement icons or the cursor keys to put the red arrows at the right pitch; select the quaver symbol (F4) and click Insert-After (or press the Full stop key).

Remember to use the Select button to insert a note with its stem pointing upwards and the Adjust button to insert a note with its stem pointing downwards. If you want to change the direction of a note stem (eg most of the notes in the first four bars!) the simplest way is to place the cursor over the note and press Ctrl-S.

There are two ways of entering the dotted crotchet at the end of the eighth bar. You can either insert a crotchet in the normal way, then select the single dot symbol and use Insert-At to add it to the crotchet, or you can select the crotchet symbol in the usual way, then, before you insert anything, select the dot

symbol using the Adjust button. This *adds* the dot selection to the selected note. Now when you click Insert-At you will enter a dotted crotchet. (A number of other symbols can be attached to a note in the same way including triplets, ties, accents and accidentals.) Because dotted notes are so common, you can select it immediately with a *double-click* on the symbol or pressing the function key twice.

The quaver rest at the end of the bar is entered just like a note. (Again, you can select dotted or triplet rests just like notes too)

When the first eight bars are complete, play it through to see what it sounds like.

Copying a block

If you look carefully at the music you will see that the second eight bars are very similar to the first eight, the only differences being in the 12th 13th and 14th bars. We can save ourselves a lot of time by copying the first eight bars and then editing the notes which need changing. To do this, we must first mark a block by *double-clicking and dragging*. To select the whole score click *twice* on the very first note of the score and *hold the* Select *mouse button down*. The pointer will change into the 'block' symbol and a dashed marker box appears. Still holding the mouse button down, drag the box out until it covers the whole score. (Since the score is too long for the screen, it will scroll automatically as you approach the edge of the screen.) When you release the mouse button, the score will be reprinted with a grey box showing exactly what has been selected. (if you release the button too soon, you can alter the right hand end of the selected area by *double-clicking* on the new position with Adjust).

Now we must place the cursor at the point where the copy is to go. This is at the very end of the score. Be sure to put the cursor on the top stave. Your screen should now look something like this:

Now all we have to do is press Ctrl-C. Alternatively, you can use the Block ♦ Copy ♦ Everything menu item.
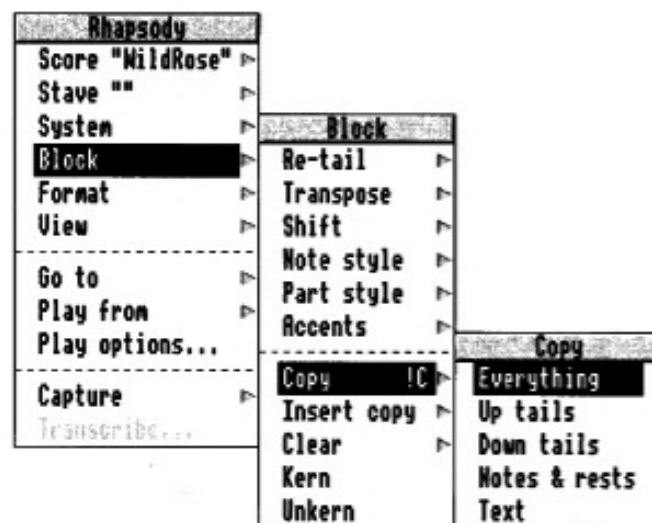
To change the notes that need changing, you can either delete the old notes and insert new ones, or you can drag the old notes to their new positions. To do this, place the pointer over the note and hold down the Select button until the pointer changes to a red note head. Now move the pointer up or down to the correct position and then release the button. Remember to use Ctrl-S if you want to change the stem of a note.

One final problem concerns the end of the score which looks a bit untidy. Every piece of music should end with a special double barline which you can find in the symbols window here:

Select it and enter it at the very end of the score (ie after the last barline using Insert-After). Now we no longer need the ordinary barline that the copy routine put at the end of the score so we should go back one space and delete it. (Note that you can't delete the old barline first because Rhapsody will automatically put it back in again!)
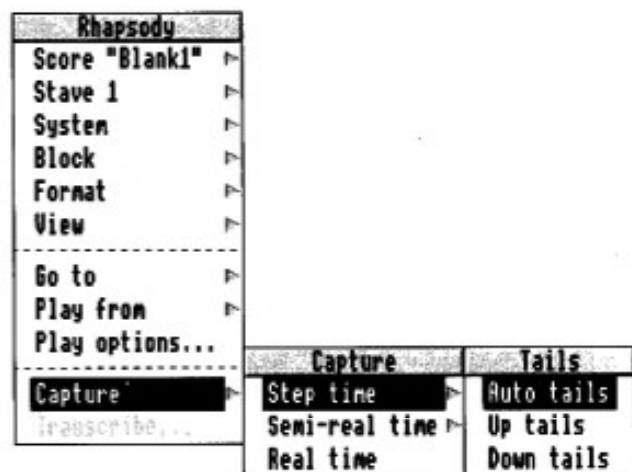
An error ?

Sharp eyed users will note that the last bar of the first stave on page 19 does not have a rest. If you have entered the last eight bars by hand instead of using the copy function you should see an error box warning you that there are not enough notes in the last bar.

Entering notes from a MIDI keyboard

If you do not have a MIDI keyboard, you can skip this section. On the other hand, if you do have a MIDI interface and a keyboard connected, you can enter notes much more quickly.

To try it out, click on the Rhapsody icon on the icon bar to bring up a new blank score. Put the cursor at the start of the score. Now choose Capture ▶ Step time ▶ Auto tails from the main score menu. (The short cut for this is Ctrl-0).

```
    Rhapsody
 Score "Blank1"  ▶
 Stave 1         ▶
 System          ▶
 Block           ▶
 Format          ▶
 View            ▶
 --------------------
 Go to           ▶
 Play from       ▶
 Play options...    ┌─────────────┬─────────────┐
 --------------------│   Capture   │   Tails     │
 Capture         ▶  │ Step time ▶ │ Auto tails  │
 Transcribe...      │ Semi-real time ▶│ Up tails │
                    │ Real time   │ Down tails  │
                    └─────────────┴─────────────┘
```

The cursor will turn orange. This indicates that you are now in **Step capture** mode. Any note that you play on the MIDI keyboard will now be sounded and entered into the score immediately. The note's length is determined by which note type is selected in the panel; the pitch is determined by the note that you played. If notes do not appear in the score when you play notes on the MIDI keyboard, check the MIDI connections between the keyboard and the computer, check that your keyboard is set to output MIDI information and check that your MIDI interface is set up correctly.

If notes appear in the score but no sound is heard, then (assuming that your amplifier/speaker system is working) you need to do one of two things. Either switch your keyboard to **Local On** (see your MIDI keyboard manual for this), or use Rhapsody's **MIDI Thru** facility. This can be found on Rhapsody's iconbar menu. For more detail on this subject, see page 145.

Printing a score

If you would like a printed copy of your score, you must format it first. This provides Rhapsody with information on how large the page is and what scale the score is to be printed at. This enables Rhapsody to work out where to put the ends of the *systems*, that is, printed music's equivalent of the lines on a page. Systems are often wider than one stave, and for large works can cover an entire page.

To do the formatting, choose Format ▶ Create... from the Main menu. This will bring up a dialogue box with a lot of information which you can ignore for now. Just click on the Create button in the bottom right hand corner. A new window will open showing how your score will look when it is printed. Open it out to have a look at it. There are a number of ways in which you can alter and improve the appearance of a formatted score but ignore this for now. Bring up the Main score menu over this new window and choose Score " - " ▶ Print . This leads to another dialogue box with some more options which you can safely ignore for now.

Assuming that you have a printer connected and the correct printer driver loaded you can now click on the Print button to produce your printed score. Obviously, the better the printer, the better the printout will be. At the time of writing we strongly recommend the Hewlett Packard HP6L laser printer. This is a very fine 600dpi printer at a reasonable cost that will produce scores equal to or better than many printed books. Clares sell this printer complete with a **free** 4MB memory upgrade (normally £130) for £365 but please check current prices before ordering.

3. Next steps

Using MIDI

If you have a MIDI keyboard connected and the results obtained, when you play back a tune from Rhapsody via your MIDI keyboard, are not what you expected then check the following:

- Ensure the correct instruments are assigned to the staves - see page 105
- Ensure Rhapsody is set up for **your** MIDI keyboard (the default is General MIDI) - see page 144 and also the file, *!Rhapsody4.MidiSetup.FileStruc*. It is also worth looking at the supplied files. The important ones are *Setup* and the files in the *GM directory*.

The required structure is that you need a directory named after your keyboard which contains a *Tones* file, which lists the instruments and their numbers. To make it easier to handle this list is split into logical *groups*. You may optionally have a *Keymaps* file in this directory too.

The *Setup* file must refer to your keyboard using the directory name.

Once set up you should never need to alter this unless you change instruments.

4. The Basics

Loading Rhapsody

Open the directory display containing the !Rhapsody4 icon

!Rhapsody4

and double-click on it. The icon appears on the icon bar.

Opening a blank score

Click Select on the !Rhapsody4 icon on the icon bar. A score window appears along with the Main Input Panel. Clicking with Adjust opens *just* the Main Input Panel, this is useful if you have a score open and want to open the panel.
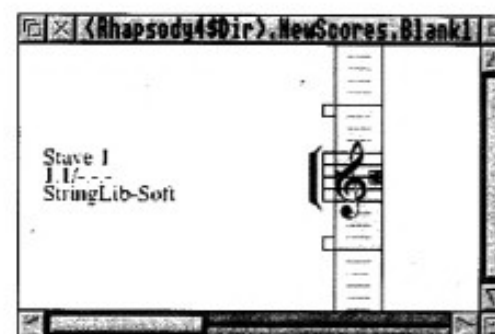
This score window is referred to as a blank score, as it contains no symbols except the default treble clef. In the absence of any other information, Rhapsody will assume that the time signature is **4/4**, the key signature is **C major** and the tempo is **120 crotchets per minute**.

You can have as many scores in memory at one time as you like, provided your computer has enough memory to store them all. However, the number of views you can have open at once is limited to about 30. If you need a new score and have many Rhapsody windows open at once, close some of the existing windows. The scores and views held in them will still be stored in memory, and you can retrieve them using **New view ◆** described below.

Blank scores

Another way to create a new score is to follow **New score ▶** on the icon bar menu. This leads to a submenu of *blank scores*. Selecting any of these will cause Rhapsody to create a new score of that type. The blank scores supplied with Rhapsody correspond to various popular instrumentations (using General MIDI). Opening a new score by clicking on the icon bar is the same as choosing **New score ▶ Blank**.

Rhapsody keeps the blank scores in the directory NewScores inside the !Rhapsody4 application. You can edit these, or add new ones, according to your needs. See page 143 for more details.

Loading an existing score

To load in a score, you can

- drag its icon from a Filer window onto the icon bar icon - a new window appears containing the score;
- drag its icon from a Filer window onto a score window - the existing score will be replaced by the new one. If the existing score contains unsaved work you are asked whether you want to overwrite it.
- double click on the file icon - a new window appears containing the score.

Note that Rhapsody 4 has a significantly different file format from older versions; a format which allows for much more flexibility. To reflect this, Rhapsody 4 files have a different file type. In order to load scores created using Rhapsody 1, 2 or 3, or Maestro files, you need to convert them into Rhapsody 4 files using the utility supplied, !R4convert.
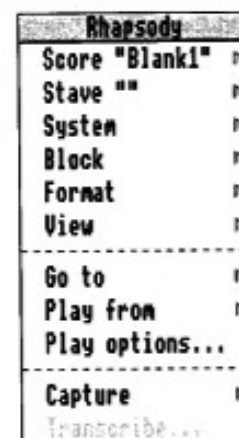
The Menus

Rhapsody has two menu trees. Clicking Menu over the iconbar icon opens the iconbar menu:

```
   Rhapsody
Info           ▶
New score      ▶
New view       ▶
Discard score  ▶
Show main panel
MIDI thru
Preferences...
-------------------
Quit
```

This menu is used for options that affect the whole program.

Clicking Menu over a score window produces the Main score menu:

```
      Rhapsody
Score "Blank1"  ▶
Stave ""        ▶
System          ▶
Block           ▶
Format          ▶
View            ▶
-------------------
Go to           ▶
Play from       ▶
Play options...
-------------------
Capture         ▶
Transcribe...
```

This menu is used for options that affect a single score, or part of the score. Some options affect only one stave, or one system. Clicking Menu over a particular stave and system will produce a menu relating to that stave and system, and to that score (and block within a score, if it contains a marked block.)

In this manual, the score, stave, block and system that the menu affects will be called the *current* score, etc., to distinguish them from the *cursor* score, etc. The position of the cursor affects only those operations which require a source and a destination. In that case, the destination is always marked by the cursor.

For information on what a System is, see the Formatting & Printing chapter. For details of the menu structure, see Appendix A.

Viewing a score

You can have several views of a score open at once. These views can be scaled and scrolled independently of one another. They can also contain the score formatted in different ways.

To open a new window onto a score held in memory, or to retrieve a score whose window has been closed, follow **New view ▶** from the iconbar menu, and select the name of the score you want to view. This option opens the score in the default, *linear format* - where the window is the length of the score and the height of one system. This format cannot be printed.

To change the format which is displayed in the current score window, without opening a new window, follow View ♦ Format ♦ from the main menu and select the format required. You can always view the score in linear format but other formats must be created first, before you can view them. See the chapter on Formatting and Printing for more details.

To open a new window of the current score with a view of a different format, follow View ♦ New view ♦ from the main menu and select the format required. The original window stays open. Again, any formats other than the linear format must be created before you can view them.

All views of a score are fully editable and changes made in one view will automatically be reflected in all the other views open at the time.

Moving around a window

Your scores may become quite large. With large scores it is important to be able to move around quickly and easily. You can move the view in a window of a score in two ways:

- using Select on the scroll bars to move the view horizontally or vertically, or Adjust on the scroll bars to move it in all directions. This follows standard RISC OS procedure.
- using the Go to option on the main menu.

The Go to menu

This contains various options regarding the position to move the display to. The options available on the Go to menu are:

- Go to ♦ Start moves the display to the beginning of the score.
- Go to ♦ Cursor moves the display to the position of the cursor, if the current score holds the cursor; otherwise, this option is greyed out.
- Go to ♦ Bar ♦ moves the display to a particular bar number.
- Go to ♦ Letter ♦ moves the display to one of the rehearsal letters. You have to place at least one rehearsal letter before you can use this option.
- Go to ♦ End moves the display to the end of the score.

Scaling a window

When a window is first opened it shows a view of the score at a scale of 100%. It is useful to be able to change the scale of the window, whether to enlarge it and check small details, or to reduce it and gain an overall view of the score.

Scales above 100% show an enlarged view; below 100%, a reduced view.

Rhapsody can cope with scales as small as 10% or as large as 1,000%. When you change the scale view in a window, the actual size of the score (as sent to a printer or other device) is unchanged. All you change is the size displayed on the screen.

Because the screen mode, the size of your monitor, and any horizontal and vertical adjustments you have made to it, all affect the displayed size and proportions of a score, it is unlikely that viewing a format 'at 100%' will correspond precisely to the size of the score when it is printed. If you require an actual-size preview, you will need to work out yourself which scale to tell Rhapsody to display at, based on the size of your monitor screen, and the screen resolution you use for Rhapsody.

To change the scale at which a window displays a score, follow View ♦ Scale ♦ from the main menu. This leads to a window:

Scale			
50%	125%	100%	/△
75%	150%		
100%	200%	Scale	
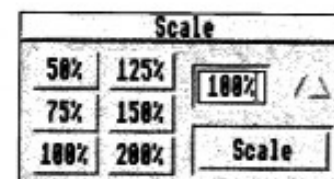
You can change the scale by

- clicking on one of the preset-scale buttons, and then on the Scale button;
- typing a value into the writable icon, and then clicking on the Scale button;
- using the bump arrows to alter the scale, and then clicking on the Scale button.

Info boxes

There are two Info boxes in Rhapsody:

- following Info ♦ from the iconbar menu opens a box giving information about the program and the version number you are using.

- following Score ♦ Info ♦ from the main menu opens a box giving information about the current score. This window is illustrated below. It tells you the length of the Rhapsody 4 file, the number of bars and notes, and an estimate of the time it would take to play.

```
ScoreInfo
Statistics
Bytes        7256
Notes        184
Bars         13

Playing time
With repeats    1m 1s
Without  "      35s
```

Saving a score

Rhapsody allows you to save your work in two different ways: in its own, Rhapsody 4 format, or as a MIDI file. Rhapsody files can be automatically compressed before saving using Acorn's Squash utility. Squashed files should be saved in their own directory as they do not show any filetype information.

There is also an **autosave** option, available from the **Preferences** dialogue, in which the computer saves your work automatically after a period of time.

Rhapsody 4 files

Rhapsody 4 has a file type of its own which contains all the data relating to a score. This includes all the different formatted versions of the score which have been calculated, as well as all the objects in the score.

This format can only be loaded and saved by Rhapsody 4, as it is significantly more flexible than that used by previous versions of Rhapsody. You can convert your old Rhapsody 1, 2 or 3 files into the new format using the application supplied, !R4convert.

To save your work as a Rhapsody 4 file, follow Score ▶ Save ▶ from the main menu. A Save box appears:

```
Save as:
[icon]
_Squashed
.Carols.LongFellow
      OK
```

You can save your work by:

- typing in a name for the score (up to 10 characters long), then dragging the file icon onto a Filer window;
- typing in a full path name in the writable icon, and clicking on the OK button;
- if there is already a full path name in the writable icon, clicking on the OK button will save the file under that name. Rhapsody puts the new path name into the icon for you when you load a score, and when you save it by dragging the icon into a Filer window. This is useful to keep a previously saved score up to date.

Selecting the option button Squashed before saving, saves the file in compressed form.

If you click on the OK button when the writable icon does not contain a full path name, Rhapsody will ask you to be more specific.

MIDI files

MIDI files differ from Rhapsody files in the way they handle music; they are designed purely to cope with playing a score through a MIDI instrument. The advantage of MIDI files is that they are extremely portable; they can be loaded by most music and sequencing packages on a variety of platforms. There are large quantities of MIDI files available over the Internet. MIDI files always contain information about:

- notes, their absolute pitch and length
- MIDI channels and voice changes

They may or may not contain information about:

- text and lyrics
- clefs, key signatures and time signatures

They never contain information about

- accidentals (sharps and flats)
- stem directions
- accents
- hairpins, slurs and phrase marks
- decorations (acciaccaturas, etc., accented notes, and trills; trills are expanded during saving and will reload as long sequences of very short notes)
- note styles
- repeat signs (like trills, repeats will be 'played out' when the score is saved)
- the layout of a score

Saving your score as a MIDI file will cause the loss of any information in the score which does not affect how it is played by a MIDI instrument. When you reload the score. Rhapsody will have to re-transcribe it from the MIDI information. This may result in a very different score from the original, although it will still play in a similar fashion.

To save a score as a MIDI file, follow Score ♦ Save MIDI ♦ from the main menu. A Save box opens:

MIDI files come in two formats: 0 and 1. Format 0 is compatible with all types of MIDI equipment and software but format 1 is preferred because it preserves information about the staves. A piece of piano music written on two staves but played on one channel will reload into Rhapsody on one stave only, when saved in format 0. When saved in format 1 and reloaded, it will appear on two staves.

You can now save the file in the same manner as for a Rhapsody 4 file.

PMS files

PMS files are text files which can be loaded into a professional music typesetting program called PMS. This program is also available from Clares Micro Supplies. To save a score as a PMS file, follow Score ♦ Save PMS ♦ from the main menu.

Autosave

Autosaving allows you to save a score automatically at regular intervals. This is useful in helping you keep the score on disc up to date. By default, Rhapsody will autosave any modified scores every 5 minutes, using a prompt window:
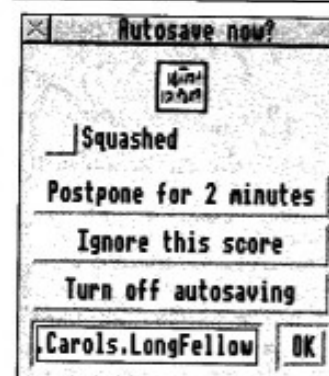
When this window appears you can:
- Save the score as from a normal Save box, by clicking on OK or dragging the icon. You can also use this method to tell the computer to start autosaving under a new file name, or to start using a squashed format.
- Click on Postpone to delay autosaving for a further 2 minutes. After 2 minutes have elapsed the prompt window will reappear.
- Click on Ignore this score to turn off autosaving for the current score only.
- Click on Turn off autosaving to turn off autosaving completely.

To alter the time interval between autosaves, or to autosave without opening the prompt window, see the Options tab in the Preferences menu on the iconbar menu. Details can be found on page 138.

You can only autosave files in Rhapsody 4 format.

Removing a score from memory

Closing a score window does not remove the score, or the format in that window, from memory. You can retrieve it by opening a new view onto it, as explained above. Closing all the windows relating to a particular score also does not remove it from memory.

To remove a score from memory, follow Discard score ♦ from the iconbar menu, and select the score you want to remove. Scores currently visible in windows are marked with a tick; those which have been modified since they were last saved, with a star. You are warned if the score you select has been modified, and given the opportunity to save it before discarding it.

You can discard all the scores currently held in memory by selecting Discard score ♦ All scores. If there are any modified scores you are warned that this action will remove them. If you want to save some at this point, you need to

Cancel the action and save them as normal, before selecting the option again.

An alternative way to discard a score is by following Score " - " ♦ Discard from the main score menu.

Quitting Rhapsody

To exit Rhapsody, select Quit from the iconbar menu. Rhapsody and all the scores and formats held in memory are removed. If there are any scores which have been modified since they were last saved, you are warned that this action will remove them. If you want to save some at this point, you need to Cancel the action and save them as normal before exiting.

It is good practice to quit all loaded applications before switching off your computer. You can do this in RISC OS 3 either by quitting all applications individually, choosing Shutdown from the Task Manager menu or pressing Shift Ctrl F12. Any of these actions will give Rhapsody the opportunity to warn you about unsaved work before exiting.

5. Playing scores

Playing a score

To start playing a score from the beginning, you can:

- press Ctrl-P (to start playing from the start of the score)
- select Play from on the main menu
- select Play from ♦ Start

To start playing from the cursor position, you can:

- press Shift-P
- select Play from ♦ Cursor
- press the Play icon on the Panel

To start playing from the left hand side of the (linear format) window, regardless of the position of the cursor, you can:

- press P
- select Play from ♦ Here

You can play a score from other positions than these using the Play from ♦ submenu of the main menu:

- Play from ♦ Bar ♦ plays the score from a particular bar number. Either type the bar number into the icon provided or use the bump arrows.
- Play from ♦ Letter/Figure ♦ plays the score from one of the rehearsal letters (or figures). (Whether letters or figures are used depends on the settings of one of the Print options. See page 133 for more details on this.) Either type the rehearsal letter (or number) into the icon provided or use the bump arrows. Obviously there has to be at least one rehearsal letter in the score before you can usefully use this option.

Whilst a score is playing, clicking on the play icon or pressing P will stop playing the score. Pressing Escape will abort playing and also move the main (linear) view of the score, if there is one, to show the bar in which playing was stopped.
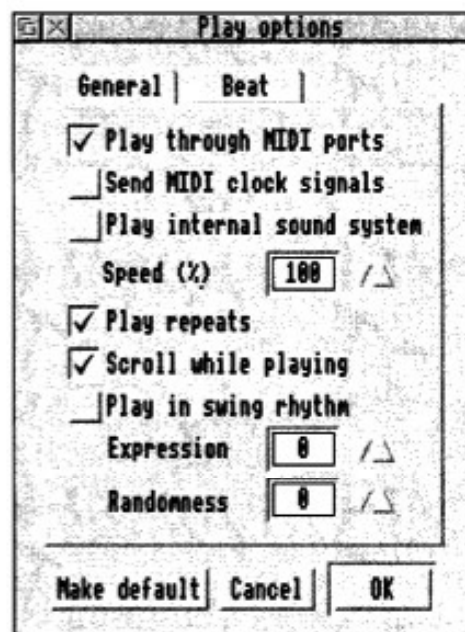
Play options

There are several options available which alter how Rhapsody plays the score. These options do not change the actual score in any way, although they are saved with it so that the score will play the same way when it is reloaded. They are available from a dialogue box reached by choosing the **Play options...** item on the main score menu.

This dialogue box, like a number of others, has several different pages with tabs at the top like a card index. Click on one of the tabs to access the relevant page.

The first page has some general options while the second has options specifically related to the metronome beat, which you can make sound whilst playing a score.

The first page is illustrated below.

```
┌─────────────────────────────────────┐
│ ▣ ☒        Play options              │
│                                      │
│   General │   Beat  │                │
│                                      │
│  ✓ Play through MIDI ports           │
│  _│Send MIDI clock signals           │
│  _│Play internal sound system        │
│                                      │
│    Speed (%)     │ 100 │ /△          │
│                                      │
│  ✓ Play repeats                      │
│  ✓ Scroll while playing              │
│  _│Play in swing rhythm              │
│    Expression   │  0  │ /△           │
│    Randomness   │  0  │ /△           │
│                                      │
│  ─────────────────────────────────  │
│  Make default│ Cancel │    OK        │
└─────────────────────────────────────┘
```

● **Play through MIDI ports**
This option is only applicable if you have a MIDI expansion card fitted, and the MIDI module is active. When ticked, Rhapsody will send notes and other events to any MIDI instruments you have fitted. The instrument, channel and voice number can be selected for each stave; see page 105 for more details.

● **Send MIDI clock signals**
MIDI clock signals are special MIDI codes which are sent out at regular intervals. They are used to synchronise other MIDI devices with Rhapsody. In principle they could be used to synchronise a slide projector or disco lights etc.

● **Play internal sound system**
All Acorn machines come with an internal sound system which is capable of producing high quality sounds. It is therefore not necessary to have a MIDI instrument to play music with Rhapsody. You will, however, need to load some extra voices if you you want to get the best from Rhapsody. Some voices are included on the support disc. The voice used can be selected for each stave; see page 110 for more details.

● **Speed**
This option allows you to change the speed at which Rhapsody plays the score. Either type in a value in the writable icon, or use the bump arrows. Values above 100% cause the score to be played faster than it is written; values below 100%, slower.

Note that the tempo changes within the score will still be observed but they are all scaled in accordance with the 'speed' setting. This enables you to skip quickly through a slow piece, or examine closely a fast one; or simply to vary the overall tempo according to your mood.

● **Play Repeats**
With this option selected, Rhapsody will play the score taking account of all repeat, Da Capo, and Dal Segno indications. If the option is turned off, Rhapsody will play through the whole score once only, skipping out any first time bars.

● **Scroll while playing**
With this option selected, Rhapsody will scroll the linear format window so as to keep the notes being played in the centre of the window. As displaying a score makes heavy demands on processor time, you may find that your computer cannot keep up with both scrolling and playing at the same time. If this is the case, switch this option off.

● **Play in Swung rhythm**
In jazz and blues scores, runs of quavers are traditionally played with the first note longer than the second. With this option on, Rhapsody plays quavers as triplet-crotchet, triplet-quaver pairs.

● Expression
Computer generated music can sound very mechanical because every crotchet and every quaver is exactly the same length. Some kinds of music can benefit from a slowing down at the beginning of a bar and a speeding up in the middle. This is what the Expression option does. A value of 100% will usually ruin all but the most slushy of pieces. Incidentally, negative values can also be used. This speeds up the start and slows down the middle of each bar. Expression can be altered within a score as well. For more details see page 87.

● Randomness
Another way to add the human touch to a piece of music is to add a random element to the exact time every note is played. This is particularly effective in pieces which have large chords as these sound very chunky when played absolutely simultaneously. Again, a value of 100% will test your sanity.

Beat options
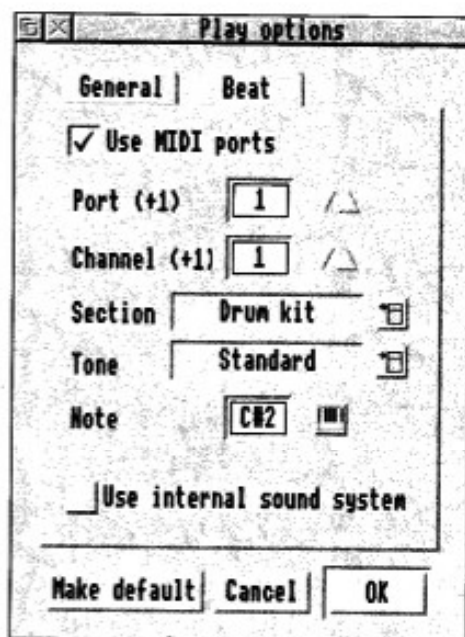
When capturing music from a keyboard in real time, it is very helpful to have a beat playing. Rhapsody takes into account the key signature, i.e. in 4/4 time it will play one strong beat and three weaker beats. In compound time, e.g. 6/8 it will play one strong beat, two weak beats, one intermediate beat and two more weak beats.

Hint: if you are capturing something in 4/4 time rather slowly, you may want quaver beats rather than crotchet beats. To do this, temporarily change the time signature to 8/8.)

● Use MIDI ports
This directs Rhapsody to play the beat through the MIDI interface.

If this option is selected, you can change the port and the channel on which the metronome beat is output by entering a value into the Port and Channel writable icons, or using the bump arrows. (The default is channel 10: the percussion channel, in General MIDI). The tone or instrument sounded is selected by choosing the section and tone from a pair of menus (For more detail on sections and tones, see page 106) You can also change the pitch of the note sounded by entering a value into the Note writable icon, or clicking on the small keyboard icon and playing a note on the MIDI instrument. This is of particular importance if you have selected a drumkit tone as different pitches play different drum sounds.

Remember that if you set up the MIDI beat to play on a certain channel with a certain voice, this will override the voice settings of any stave in your score which uses the same channel. Of course, if this is set to the same voice, this will not matter.

● Use internal sound system
If the beat is played on the internal speaker Rhapsody will allocate one channel to it. This will override the score, and consequently some notes may fail to be played. The voice used is 'Percussion-Noise'.

Saving Play options

When you are happy with the play options, click on the OK button. If you wish to abandon any changes you have made, click on Cancel. If you wish to save the options so that every time you open a new **blank** score, it will have these options, click on Make default.

Stopping play

While a score is playing, you can stop it in one of three ways:

- click on the play icon again
- press P (This only works if Rhapsody has the input focus)
- press the Escape key. This last method has the advantage that the window of the score being played automatically jumps to the place where playing stopped. This is useful because, if you hear a mistake while a score is being played, you can quickly jump to the bar where the mistake is.

Blank page

6. Entering and editing

Structure of a score

Before explaining things in more detail it would be convenient to start by explaining some of the terminology to be used.

Every score has a certain number of *staves*. (The maximum number of staves allowed is 50.) Each stave can have its own name, MIDI channel and voice, and various other options. On the printed score, a stave appears as a group of five lines (or just a single line in the case of a percussion stave).

When a score is formatted, the score is broken up into a number of *systems*. Systems are printed music's equivalent of the lines on a page - they are often wider than one stave, and for large works can cover an entire page. Normally, every system contains all the staves, but it is possible to suppress staves which are not needed so that staves which are blank throughout a system may be skipped if space is at a premium.

From a purely musical point of view, the division of a score into systems is irrelevant - which is why it is best to edit music in the linear format mode.

The fundamental division employed by Rhapsody is the *slot*. Each slot has a definite width on the printed score which is the same for all the staves. More importantly, each slot has a definite *time* associated with it, so that all notes in the same slot are necessarily played simultaneously. (It is this fundamental assumption about musical structure that prevents Rhapsody from dealing sensibly with avant-garde and atemporal music.) The physical width of a slot can be altered by dragging its handle (see page 44) but the *time* a slot is played depends on what goes on before it, and its *length* in time is determined by the *shortest* note or rest which it contains. The next slot follows as soon as that note or rest's time value is over.

Every object must be placed in a slot, even those objects like key signatures, clefs and time signatures which do not in themselves take any musical time. Even barlines occupy a slot.

Just as it is possible to write ungrammatical English, it is possible to write ungrammatical music. Rhapsody can detect some of these errors and warn you about them, but it cannot guess what you intended to write any more than a spell checker can, so at the end of the day it is up to you to make sure that what you have written is musically consistent.

If a slot contains notes, there is a further division; the *cluster*, which corresponds to a note or chord of notes with the same tail. There are normally up to two clusters on each stave, one up-tailed and one down-tailed. Attributes such as note length (including dots, triplets and ties), accents, trills and note styles apply to a whole cluster. In addition to the two standard clusters, is is possible to have two further *alternative clusters* on each stave. For further details about alternative notes, see page 55.

The cursor

It is important for there to be a position in a particular score marked for editing, rather like the caret in a word-processor. This position, which determines where most editing occurs (as well as other operations like copying or playing) is shown by the *cursor*. Items are inserted into or around the *cursor position*, in the score and slot marked, and, when the height of an item up the stave is important, at the height of the red arrows. The cursor can only be in one place at any time, like the caret of a text editing program.

The vertical extent and colour of the cursor can be configured; see page 137 for more details. The cursor is shown in its normal and extended forms below. Note the red arrows on middle C and the little red box on the right hand side.
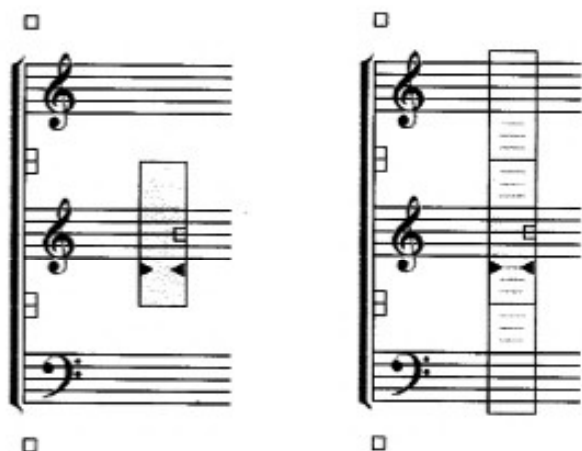
The action of the mouse buttons and the number of positions available is unchanged by how the cursor is shown. The yellow region shows the extent of the stave on either side of the actual stave lines. The extended region of the cursor shows the range of possible positions for notes and other objects which are attached to that stave.

If you want to position the red arrows in one of the extended (white) areas of the cursor, you will find that clicking in this area will not in general work because Rhapsody will assume that you want to move to another stave. To move the red arrows into these extended positions, you must click in the yellow portion and use the cursor movement icons on the main panel, or the cursor keys on the keyboard.

Moving the cursor

To move the cursor once it is in a score, you can:

• click on the slot you want to move the cursor to (note that in drop mode, this will also cause an item to be inserted; see *Drop mode*, below)
• click on the four arrow icons at the top left of the Panel,
• press the arrow keys on the keyboard.

The arrow icons and the arrow keys have similar effects. Select on these icons has the same action as pressing an arrow key, and Adjust the same action as pressing that key whilst pressing Shift, namely,

Select-click or arrow keys:

Up	Move the cursor position (red arrows) up one line
Down	Move the cursor position down one line
Left	Move the cursor left one slot
Right	Move the cursor right one slot

Adjust-click or Shift-arrow keys:

Up	Move the cursor up one octave
Down	Move the cursor down one octave
Left	Move the cursor left one bar
Right	Move the cursor right one bar

If the arrow keys are used in conjunction with Ctrl there is an additional set of movements that can be performed:

Ctrl-arrow keys:

Up	Move up one stave
Down	Move down one stave
Left	Move to the beginning of the score
Right	Move to the end of the score

To move the cursor large distances you can make use of the Go to option on the main menu. See page 154 for more details.

Resizing a slot

The little red square inside the cursor is a handle which allows you to adjust the width of a slot. Click on the square and hold the mouse button down. When the pointer changes to a left/right arrow, move the mouse to the desired width and release the mouse button. Note that in general, Rhapsody calculates the best slot width every time the slot is edited so you should not need this option very often. When you do use it, however, make sure that it is one of the last things you do, so that the slot width is not changed by some other action.

It is often desirable to adjust slot widths when triplets occur against duplets in another stave. There is, however, a special option for this. See page 93.

Resizing a stave

At the beginning of a stave there are two more red handles on each stave. These control the height and hence the spacing of the staves and can be dragged in exactly the same way. Each stave can be high enough to accommodate all the extended positions available in Rhapsody. This should be enough for several verses of lyrics as well as very low or high notes. If further space is required for lyrics below a stave, you will need to give the next stave down more space above it, and enter them at the top of this space. In the last resort, you could even insert a blank stave to carry the lyrics (see page 101).

The Panel

Most entering and editing is done through the Panel. This is the window that allows you to select what items to place in the score, and to insert, modify, and delete those items.

To bring up the Panel, you can either:

- click Menu over the icon bar icon to bring up the menu, and then select Show main panel, or
- place the cursor in a score window and press TAB or
- click Adjust on the icon bar icon

When it is first opened, the Panel looks like this:
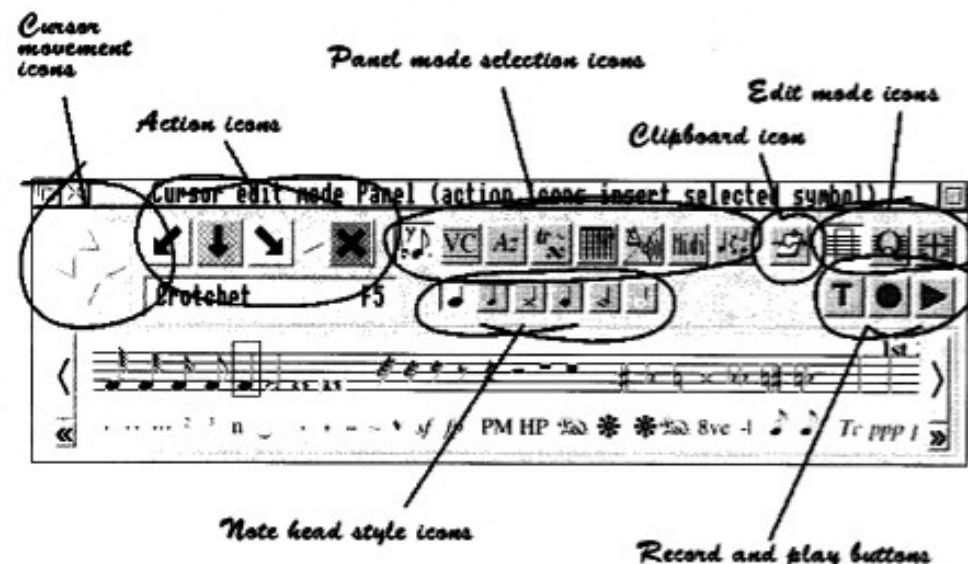
Here we shall look at each group of icons in more detail.

Panel mode selection icons

The row of eight grey icons at the top of the Panel control what kind of object is selected. When you click on one of these icons, the white panel below, changes according to what kind of object you have selected. From left to right, these are:

Symbols - This panel contains nearly 200 different musical symbols

Voice Changes - These allow you to alter the internal voice assigned to the stave or the MIDI channel and/or voice number of a stave at any point along its length. This is useful where the number of channels is limited, or where there is a separate voice for a required effect (e.g. guitar harmonics) For further details see page 81.

Text - This allows you to enter any text or lyrics you require. See page 82.

Trill definitions - Rhapsody has six trill symbols and six different kinds of accents. Each has a default action when played. It is possible, however to change the definitions of all the trills, and the way the accents are played, by inserting a trill definition at the start (or indeed anywhere) in the score. This panel enables you to set up such a definition. Note that the trills and accents themselves are inserted from the symbols window in the usual way. This panel only changes the way they are played. See page 84 for more detail.

Guitar Chords - This panel enables you to enter guitar chords either from a large selection of predefined chords, or build your own. Note that the chords appear across a whole stave; it is therefore necessary to create a blank stave to hold them. See page 86.

Tempo and Volume Changes - either instantaneous or gradual. Tempo changes are useful for rubato and pauses as well as written speed changes. Volume changes differ from dynamics (eg *pp, fff* etc.) in that they alter the MIDI volume rather than the key velocity; these can also be instantaneous or gradual, allowing complex crescendos and diminuendos. See page 87.

MIDI events - allows you to insert MIDI sequences such as pitch bend commands and system exclusive messages into your score. See page 89.

Object Adjustments - a range of options allowing you to change the stems, break or reinstate beams, edit note values, apply kerning and other facilities. See page 90.

The different object types are explained in detail in chapters 8 and 9.

The Clipboard icon

Rhapsody maintains a hidden score called the clipboard. Whenever you perform any major operation on a score such as retailing a block or deleting a stave, Rhapsody always saves the unmodified score on the clipboard. When the clipboard has such an unmodified score, a red border appears round the icon. If you decide that you did not want to carry out that particular modification, you can click on the clipboard icon to retrieve the original score. In fact what this does is to swap the score with the cursor in it with the one on the clipboard so if you decide you do want the modified score after all, a second click will swap them back again. In this way Rhapsody allows you to undo its more drastic operations.

You can save and retrieve scores from the clipboard using a menu option as well.

Edit mode icons

This group of three icons determine which edit mode is selected *Cursor edit mode, Quick edit mode* or *Drop edit mode*.

The Panel starts off in *cursor edit mode*. In this mode, there are three stages to the placing or editing of an object

- First place the cursor at the correct position
- Next select the symbol you want to enter or edit
- Click on one of the action icons described below.

In *Quick edit mode* you do not have to click on the action icons. Symbols are inserted at the cursor position **as soon as you click on them**. For this reason the selected symbol appears white in the symbols window because the selected symbol is not really relevant. This mode is most useful when you want to add a lot of extra different symbols such as accents or hairpins to an existing score. Click on the score to position the cursor - then click on the symbol you want to insert.

To insert a symbol in a new slot after the cursor slot, hold down Shift whilst clicking on the symbol.

If you hold down the Ctrl key when entering a note, the cursor will automatically move to the right position to enter the next note of the melody.

Since you don't need the action icons, these are greyed out except for the delete icon which works in the usual way. Most of the mode selection icons are greyed out for the same reason.

In *Drop edit mode* you do not have to position the cursor. This time you select the appropriate symbol and then **click on the score at the position required**. The cursor appears white because its position is not really relevant.

If you hold the Shift key down when clicking on the score, the object will be inserted *after* the selected position rather then *at* it.

Hold down the Ctrl key to move to the next position automatically. Again the action icons are greyed out except for the delete icon. Be careful not to click on the score to reposition the cursor as this will insert a new object! Use the cursor movement icons or the cursor keys instead.

For both Quick edit and Drop edit you can use the keyboard shortcuts to select the note and object type for speedy entry.

The action icons

These are used to insert items from the panel onto the score, or delete them from the score. If a note is to be inserted, the mouse buttons are used to determine the tail direction; Select inserts an up-tailed note, Adjust a down-tailed note. Some other items also vary according to which of the mouse buttons are used to insert them. These are detailed in chapters 8 & 9.

Each of these icons has a keyboard shortcut which form a similarly arranged group at the bottom of the keyboard
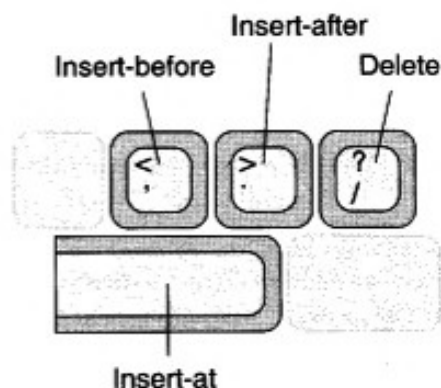
Whenever the keyboard short cuts are used, pressing the Shift key down has exactly the same effect as using the Adjust button on the mouse. In addition, the Caps Lock key can be used just as in a word processor: when the Caps Lock light on the keyboard is on, Rhapsody will reverse its normal operations, inserting down tails by default and up tails if you press the Shift key. This makes it easy to enter a whole string of down tail notes using the keyboard.

The Insert Before icon (Keyboard shortcut ' , ')

Clicking on this icon (or pressing ' , ') causes a new slot to be created to the left of the cursor. The cursor is moved into the new slot, and the currently-selected item is inserted at the cursor position.

Not all items can exist on their own in a slot; notably, dynamics, accents and trills, tempo changes, volume changes, and voice changes. These symbols cannot be

inserted using the Insert-before icon, although you may be able to Insert a note with the object, then Delete the note, leaving the object in its own slot. This is not recommended; you should find an existing slot to place the object in.

The Insert-at icon (Keyboard shortcut Space)

Clicking on this icon (or pressing Space) causes the currently-selected item to be inserted at the cursor position.

Some combinations of items cannot exist together in the same slot. If you attempt to create one of these combinations, Rhapsody will not let you insert the second item. You should use Insert-before or Insert-after to create a new slot for the second item. The forbidden combinations are generally self-explanatory:

clefs and: key signatures, time signatures, notes, rests, barlines
key signatures and: time signatures, notes, rests, barlines
time signatures and: notes, rests, barlines
notes and: barlines
rests and: barlines

Other combinations, consisting of items of the same type (such as crotchets and quavers with the same stem, or two different kinds of accent), also cannot exist. If you attempt to Insert these, Rhapsody will replace the original item with the new one.

Automatic cursor movement

When adding a second or subsequent part to an already existing score, it is necessary to use the Insert-at icon and then to move the cursor in readiness for the next note. Rhapsody can do all of this for you. Just hold down the Ctrl key while clicking on the Insert-at icon. If you are using the Space bar to insert notes, Ctrl-Space will do the same.

The Insert After icon (Keyboard shortcut ' . ')

Clicking on this icon (or pressing ' . ') causes a new slot to be created to the right of the cursor. The cursor is moved into the new slot, and the currently-selected item is inserted at the cursor position.

Not all items can be inserted into a new slot on their own, notably, dynamics, accents and trills, tempo changes, volume changes, and voice changes. These symbols cannot be inserted using the Insert-after icon, although you may be able

to insert a note with the object, then delete the note, leaving the object in its own slot. This is not recommended; you should find an existing slot to place the object in.

The Delete icon (Keyboard shortcut ' / ')

Clicking on this icon (or pressing ' / ') will delete an item from the cursor slot. Which item is deleted depends on the items at the cursor position, and the item selected in the panel.

If there is one item of the same kind as the one selected (note, rest, trill, etc.) at the cursor position, that item is deleted.

If there are two items of that kind (eg two notes with different tails, etc.,) at the exact cursor position, which item is deleted depends on which **mouse button** is used. Select will delete the up tail note, Adjust will delete the down tail note. (As always, when using the keyboard, pressing the Shift key or switching to Caps-lock mode has the same effect as using the Adjust button.)

If there is no item of that kind at the cursor position, Rhapsody deletes the **nearest** item of that kind to the cursor position in the cursor slot.

If there is no item of that kind in the cursor slot at all, Rhapsody will not be able to delete anything as long as items of other kinds remain. If you delete the last object in the whole slot, the slot will be left in the score but it will be completely blank. This is so that you can easily replace the deleted object with a new one. If on the other hand you want to delete the slot completely, click on the Delete icon again.

To delete a whole slot including everything in it, press Ctrl-Shift-Delete.

The Insert new slot icon

This icon (which looks like a cursor movement icon) is sandwiched between the Insert-after and the Delete icon. It acts like the Insert-after icon but it doesn't insert anything. Alternatively you can think of it as moving the cursor to the right, opening up the score at the same time.

Dragging Symbols

Most of Rhapsody's musical symbols can be dragged anywhere around a score and even from one score to another. The general method is as follows.

● Place the pointer over the symbol you want to move. Press Select (to move the symbol) or Adjust (to copy it and insert the copy somewhere else). Hold the

button down until the pointer changes. The pointer shape will indicate the kind of symbol you have picked up. eg a note head for a note, a sharp sign for an accidental, 'Cl' for a clef and 'Ks' for a key signature etc.

● Move the pointer to the place you want the new symbol and release the mouse button.

Most symbols will be automatically positioned by Rhapsody and will therefore jump into line when you release the mouse button. Other symbols (notably hairpins and phrase marks) you are allowed to position anywhere you like.

Micro adjusting note clusters, accidentals and accents

It occasionally happens that with complex clusters including accidentals (particularly if you are using *alternative notes* as well - see page 55) Rhapsody is unable to determine the clearest possible way of printing the clusters. To solve this problem you can adjust the position of any cluster or accidental sideways within a slot by holding down the Ctrl key while you drag the object.

For example, this is how Rhapsody prints a certain bar

You can see how the F# in the alto part is obscuring the G in the soprano part. By moving the G to the right and the F# to the left you can obtain the following much clearer result.

In the next example, alternative notes (see page 55) have been used to write three parts on a single stave.

In order to separate the overlapping notes, move them sideways as shown below:

In order to micro adjust an alternative note, you must hold Alt down as well as Ctrl.

Here is another bar:

The problem in this example is all those troublesome accidentals. By micro adjusting the positions of the accidentals, you can easily produce the following:

In addition to adjusting the positions of clusters and accidentals sideways, you can also move accents and trills further away from the note. Again this is done by holding down the Ctrl key while you drag the accent. The following (unlikely) score was entered by micro-adjusting the positions of the trills and adding the accidentals as text objects (using the small PMS alpha font).

If there are two notes on the same line, one with an up tail and the other with a down tail, using the Select button when micro-adjusting will move the up tail note; using the Adjust button will move the down tail note. Note that whenever you edit anything in a slot Rhapsody will 'tidy up' the whole slot, and sometimes the slots on each side as well. This will destroy any micro adjusting that you have carried out. *Only do the necessary micro-adjusting when you are sure that all other editing is complete.*

7. Musical symbols

This chapter contain detailed descriptions of all the musical symbols available in Rhapsody. These symbols are reached by selecting the first of the eight panel mode selection icons (the symbols group). For more information on the Panel see chapter 6, *Entering and editing*.

When the Symbol group icon is selected (including during quick edit mode) the symbols window contains a selection of nearly 200 different musical symbols.
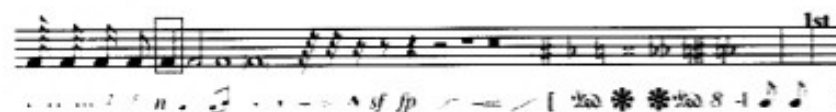
Since it is not possible to display all the symbols at once, you can move the symbols window left and right. There are four ways of doing this; you can:

- click on the symbols window and drag the mouse pointer to the left or the right
- click on the two large arrow icons to left and right with either Select or Adjust and hold the mouse button down. The view moves slowly at first, then accelerates. Using the Adjust button reverses the direction of motion.
- click on the two smaller double arrow icons to left and right with either Select or Adjust; these move the display one screen full at a time. As before, using the Adjust button reverses the direction of motion.
- press Ctrl-Page Up or Ctrl-Page Down.

All the symbols are selected by clicking on them. The name of the symbol is shown in the box above the symbols window.

Another way to select a symbol quickly is to click on a similar symbol already present in the score using the Adjust button. The symbol is selected and the symbols window scrolls to show the selection.

Most symbols can then be inserted immediately, using whichever mode of editing is being used. (If you are using Quick edit mode, the symbol is inserted as soon as you click on it for the first time; this means you have to be careful when moving the symbols window.)

If the symbols scroll slowly then it is likely that your font cache is set too low. try increasing it via the Task Manager window, or permanently using Configure.
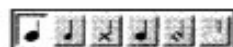
Notes and rests

Rhapsody allows you to enter notes and rests of lengths between hemi-demi-semiquavers (1/16 crotchet) and breves (8 crotchets). Select the one you want, position the cursor and click on Insert-at.

Notes can be in one of six styles as indicated by the note style icons illustrated below.

The styles are:

- normal
- small   sometimes used for alternative or optional notes
- crosshead   often used for unpitched notes eg a shout
- diamond   give an old style look to a score
- open diamond   used for harmonics
- headless   sometimes used where only the rhythm is important

All these styles are applied to individual noteheads. It is perfectly possible, therefore to have a chord (or *cluster*) containing two or more noteheads, each with a different style. This is required for the correct writing of artificial harmonics, for example.

(In addition to the *note* styles, there are two *part* styles which may usefully be mentioned here. These are:

- cue   used to indicate other parts being played
- stemless   used for plainsong chants

It is not possible to select these options when entering notes; so enter them as normal notes, then used the Block ▶ Part style ▶ menu to set the part style. (see page 120).

Invisible notes can be produced by using the stemless part style together with the headless note style. Since the beams or short notes will still be visible, this can be used to achieve some effects found in some modern music.)

Each stave can have up to two parts (e.g. soprano and alto) on it, an up-tailed part and a down-tailed part; each of these can contain a note, chord or rest. Click Select when inserting to add an up tail note; Adjust to add a down tail note. Alternatively, if you wish to use the keyboard to edit, holding down the Shift

key (or switching to Caps Lock mode) has the same effect as using the Adjust button. When deleting, the note nearest the cursor is used regardless of the status of the mouse buttons except when there are two notes on the same line of the stave. Then the mouse buttons determine which is to be deleted.

It is easy to become confused about scores containing two parts on the same stave. It may be useful to note these points:

- Semibreves and breves are notes with 'tails' just like the other notes, so it is important to get them the right way up wherever they occur. Accents always place themselves on the opposite side of a note to the tail, so you can find out the direction of a note like this by giving it an accent temporarily.
- It is normal for the stems of the upper (eg Soprano) part to point up and the lower (Alto) part to point down but when the Alto part goes higher than the Soprano, the tails will cross. This is standard practice, e.g.:

- Rhapsody will handle two part music with rests just as easily. For example:

When inserting rests, if you use the Select button, Rhapsody will put the rest in its default position. If, however, you use the Adjust button (or if you hold the Shift key down while using the keyboard) the rest will be inserted at the height of the red cursor arrows. Remember that you can drag rests up and down a stave too, just like notes and other symbols.

Alternative notes

The two-part structure means that Rhapsody does not expect notes of more than two different lengths to share the same slot. Normally this is not a problem, but it can be worked around by transferring some notes to another stave. Given that three parts per stave can become confusing, it may be a good idea to consider adding a new stave in any case. (Rhapsody has no problems bracing three or more staves together, in the case of keyboard music.)

That said, there *is* a way to enter more than two parts into the same slot. This is done by holding down the Alt key while inserting a note with Select. Notes entered in this way are called 'alternative' notes and are displayed in a different colour to distinguish them from ordinary notes. Alternative notes are just like ordinary notes but they are completely independent, giving you access to up to four parts per stave (two up, and two down). In order to drag, edit, or modify them in any way, the Alt key must be held down. For example, to add an accidental to an alternative note, select the appropriate symbol, place the cursor over the note, press and hold the Alt key and click on Insert-at. Note that while the Alt key is pressed, Rhapsody will look for the nearest *alternative* note, not necessarily the nearest note to the red cursor arrows. (Note also that the keyboard short cuts cannot be used when inserting alternative notes because holding down the Alt key temporarily changes the way RISC OS interprets the keyboard.)

Although they are played as normal, Rhapsody ignores alternative notes when calculating the time position of notes within the bar so it is possible to put too many alternative notes in a bar without Rhapsody complaining. This can lead to unpredictable results when the score is played.

Block operations (for example, changing the note style or adding accents) can also be carried out on alternative notes by having the Alt key held down when the relevant menu option is selected. Clear operations, however, act on both normal and alternative notes simultaneously.

Since alternative notes or clusters may overlap the ordinary notes with the same stems, is is often necessary to displace them (or the notes they obscure) a little way sideways. This is called Micro adjusting, and is carried out using the Ctrl key. In other words, to displace an alternative note cluster sideways, you must press Alt Ctrl while dragging the note. See page 51 for more information on Micro adjusting notes.

Alternative notes are useful in three situations:
- when a single stave has to handle more than two independent parts
- when a chord contains more than two notes of different lengths
- when a single part has an *ossia* or alternative version.

Example: Handling more than two independent parts

Here the first Alto line moves independently of the other parts and has been inserted using alternative notes. Normally speaking, it would be better to put the Soprano and Alto parts on separate staves but there are times when a short score is adequate.

Example: Chords containing notes of different lengths

This example could be written in two parts, but if it is for piano or organ, it is normally written using alternative notes as shown. Note that wherever possible, you should make the *longer* notes alternative notes. This will ensure that Rhapsody plays the bar correctly.

Example: An ossia part

Sometimes an alternative note, or series of notes, is provided for the benefit of players unable or unwilling to produce the note written (this is especially true of very low or very high notes.) The alternative note is given a small note-head as in the following example:

To produce this effect:

1. enter the standard notes in the usual way
2. select the minim symbol
3. click on the 'small notehead' icon (see page 54).
4. insert the note using the Adjust button so that the tail points down (the new note

will be completely obscured by the original one, but it is there all the same)

- holding down both Ctrl and Alt, drag the note sideways so that it becomes visible
- increase the width of the slot using the handle on the cursor
- repeat ❷, ❸ and ❹ as necessary for other ossia notes.

Multiple symbol entry

It is possible to select several other symbols together with a note or rest at the same time, so that strings of notes with accidentals, dots, etc., may be entered easily. To do this, select the note or rest in the normal manner, then click Adjust successively on each of the symbols you want to be associated with the new note.

You can do this with most of the symbols commonly associated with notes:

- accidentals (sharp, flat, natural, double sharp, etc.)
- dots (including double and triple dots)
- triplets (including duplets and n-plets)
- accents (including *sforzando* and *forte-piano*)
- ties and slurs.

All these symbols are by default located on the same section of the symbols window, so as to be easily reachable. Note that it makes no sense for a rest to have an accidental, accent or tie; however, the dot and triplet options are still available.

The Adjust-selection feature makes it possible to enter a tied, staccato triplet dotted quaver with a double flat with one click of the Insert button - after you have set up the selection, naturally.

Accidentals

These can be inserted wherever there is a note. If the cursor position is not exactly on a note, Rhapsody will place the accidental on the nearest note. Accidentals can be selected at the same time as notes using Adjust; see above for more information.

Bracketed accidentals

Sometimes it is useful to put an accidental into a part which is not strictly necessary. Such an accidental is placed in brackets, as shown in the example below.

To enter a bracketed accidental, select the accidental you need and use the Adjust button to insert it (or the Shift key, if you are entering notes with the keyboard).

Barlines

There are two kinds of 'bar' lines, which we shall call *proper barlines* and *supplementary barlines*. Proper barlines always denote the end of one bar and the beginning of the next, and are numbered as such. Supplementary barlines may occur in the middle of a bar as well as between them, and it is necessary to insert both a proper and a supplementary barline into a slot if you need a repeat, double barline, etc., at the end of a bar. Often Rhapsody will have inserted the proper barline for you, and you need only insert the supplementary one afterwards. If a supplementary barline exists in a slot, the proper barline is not printed, although it makes a difference to the bar count.

The proper barlines available in Rhapsody 4 are:

- the standard barline
- the first time bar; all bars from this bar until the next repeat sign are played only when the repeated section is being played for the first time. If this section is very long and ends at (or soon after) the repeat bar, you may want to consider using a DS or DS al fine instead. Scores vary on whether the bar numbering includes first time bars or not; see chapter 5 for more details.
- the second time bar; it is normal to place this at the repeat sign to complement the first time bar, although it does not actually affect how it is played. It draws attention to the fact that the second-time section has *replaced* the first-time section when played the second time around. If the repeat sign was in the middle of a bar, it may not be possible to use the second time bar sign.
- the rehearsal mark; this is like the standard barline, but a letter or number appears above the score at that point. Rehearsal marks draw attention to points of change in the score, the start points of new sections and the like, that would be useful starting points in a rehearsal. To change whether rehearsal marks are printed as letters or as numbers see page 133.

Likewise, the supplementary barlines are:

- the short bar line: this is used to mark off sections within a bar, especially if the time signature is unusual or has different interpretations (for example, a bar of 5/4 can have the stress on the first and third [2:3], or the first and fourth beats [3:2], this is made clear by the use of these barlines)
- the double bar line: used to separate distinct sections within a piece, for example between the verse and chorus of a song, or the exposition and development of a sonata, or when the key or time signature changes in the middle of a score.
- the end bar line, which is always placed at the end of a piece.
- the start repeat, end repeat and double repeat barlines. Although these are normally found 'on top of' (overwriting) a proper barline, they can also be placed in the middle of a bar. If you place repeat barlines in the middle of bars, make sure the start and end of the repeated section are both on the same beat of the bar, otherwise strange things may happen when the score is played.
- the dotted barline, provided as an alternative to the short bar line.
- the caesura: where there is a short pause between one beat and the next involving all the instruments, this symbol can be placed between the beats. If such a gap is to have a definite length, use a rest with a pause symbol on it, or the direction *G.P.* (general pause) which instructs the conductor to keep strict time throughout the period of silence.
- the blank space, which can be used to separate two movements of a piece, or to put a small gap between the main body of a score and a *Coda* at the end.

Clefs

Nine clefs are available in Rhapsody 4:

- the treble or G clef; middle C is the first leger line underneath the stave
- the alto or C clef; middle C is the central line
- the vocal tenor clef; one octave below the treble clef (hence the treble clef symbol with an 8 underneath), middle C is the second space from the top
- the baritone clef; middle C is the second line from the top
- the bass or F clef; middle C is the first leger line above the stave
- the percussion clef; internally, this uses the same pitches as the treble clef, but instruments using this clef usually do not need pitch. Drum kit scores often use the lines and spaces to represent the different drums and cymbals available; this can be simulated by using a *pitch map*, set for the stave. See chapter 14 for more information.
- the soprano clef; middle C is the bottom line
- the mezzo clef; middle C is the second line up from the bottom.
- the baritone clef; middle C is the top line.

Automatic clef transposition

When you insert a clef into a stave which already contains notes, Rhapsody will automatically shift the following notes on that stave up or down, so as to keep the pitch of each note the same in the new clef. This useful feature has one drawback: if you copy a block of a score into a stave which has the wrong clef for it, Rhapsody will not notice and the score will play at the wrong pitch. The correct thing to do now is to mark the copied area and **shift** it to the right pitch using the block-shift routine (see page 118). What you **cannot** do is simply put the right clef in front of the copied area. This will automatically shift the copied area so that it plays at the same (wrong) pitch!

To avoid having to shift blocks like this, you need to make sure that *when you copy blocks, the clefs of both source and destination are the same.*

Clefs can be inserted anywhere in a score, even in the middle of a bar, but if a new clef appears at the beginning of a bar it should be placed *before* the bar line (and before any change of key signature).

Key signatures

All the key signatures from 7 flats to 7 sharps are available.

When a key signature is inserted, Rhapsody takes account of the existing key signature, if there is one, to determine whether the key signature needs naturalising. Some composers prefer to naturalise all the sharps or flats in a key signature before replacing them with a new key signature. You can do this by placing a C major (the single-natural symbol) signature immediately before the signature you require.

Automatic key signature transposition

Whenever you insert a new key signature, Rhapsody automatically transposes the rest of the stave, up to the next key signature so that the accidentals are correct. The problem here is the same as with clefs. If you copy a block into a stave with a different key signature, you will have to change all the accidentals by hand. It would be better to use the clipboard undo facility! (see page 46).

Key signatures can be placed anywhere in a score, even in the middle of a bar. If a new key signature occurs at the beginning of a bar, it should, however, be placed *before* the bar line (and after any change of clef).
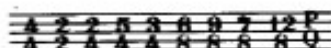
Time signatures

Nine commonly-used time signatures are available directly from the symbols window. The final symbol (the PQ-time-signature symbol) allows you to enter any time signature.

When the PQ-time-signature symbol is selected, writable icons appear above the symbols window to allow you to enter any time signature. The upper number is the one that appears before the slash. Time signatures between 1/1 and 32/32 may be entered.

Unlike clefs and key signatures, time signatures **cannot** be placed in the middle of a bar. When they occur in the middle of a score they should be placed immediately *after* a barline.

8. Additional symbols

Dots, triplets, ties and slurs
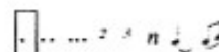
The first group on the bottom row of the symbols window contains dots, triplets and the like, the tie and the slur symbol.

Dots are inserted onto a note or rest to augment its length:
- the single dot . lengthens a note by 1/2 its original length
- the double dot .. lengthens a note by 1/2 + 1/4 = 3/4 its original length
- the triple dot ... lengthens a note by 1/2 + 1/4 + 1/8 = 7/8 its original length.

Dots can be inserted wherever there is a note or rest. If the cursor position is not exactly on a note, Rhapsody will place the dot on the nearest note. If a dot is placed on one note of a chord, Rhapsody will automatically dot the other notes in that chord. If you want one note to remain undotted, you will have to use a cluster with the opposite tail or use an alternative note cluster (see page 55). If a slot contains one note and a rest, using Select will dot (or undot) the note, Adjust will dot (or undot) the rest.

Dots can be selected at the same time as notes using Adjust; see the previous chapter, for more information.

(Dots should not be confused with the staccato 'dot' later in the window (placed with the accents), which can also be attached to any note.)

A **triplet** note (shown as a 3 in the symbols window) is 2/3 the length of its base (non-triplet) note, so that three of these fit into the same time space occupied by two normal notes. Duplets (shown as 2) are the opposite of this and occur in compound time; they are longer than their base note, so that two duplets fit into the space of three normal notes. Note that a duplet quaver, for example, is the same length as a dotted quaver; the difference is one of notation.

Sometimes sets of notes are encountered with more complicated lengths than standard duplets or triplets. These notes can be created using the n-plet (tuplet) symbol (n). When this symbol is selected, writable icons appear to allow you to enter the nature of the n-plets. A standard triplet plays 3 notes in the space normally occupied by 2 of that kind of note, and is therefore entered like this:

$$\boxed{3} \; / \triangle \text{ notes in } \boxed{2} \; / \triangle \text{ beats}$$

Quintuplets normally consist of 5 in the space of 4 (although in compound time, they can be 5 in the space of 6; this would correspond to a different setting of these icons)

$$\boxed{5} \; / \triangle \text{ notes in } \boxed{4} \; / \triangle \text{ beats}$$

All these symbols can be inserted wherever there is a note. If the cursor position is not exactly on a note, Rhapsody will place the symbol on the nearest note. If a triplet is placed on one note of a chord, Rhapsody will automatically change the other notes in that chord. If you want one note to remain un-tripletted, you will need to give it the opposite tail to the triplet notes or use an alternative note cluster.

Triplets can be selected at the same time as notes using Adjust.

Triplets can be added and removed from rests in the same way as dots.

A tie between two notes instructs the player to play the notes as if they were a single note with the combined length of the two notes. By convention a note is split into two or more tied notes if it needs to be played across a barline or strong beat in a bar. Rhapsody does not assume you will use this convention (except when transcribing music played on a MIDI keyboard), but it can make scores clearer to read, and it is the only way to enter notes of some lengths, especially in unusual time signatures.

A tie can be inserted wherever there is a note. If the cursor position is not exactly on a note, Rhapsody will place the symbol on the nearest note. If a tie is placed on one note of a chord, Rhapsody will automatically tie the other notes in that chord. If you want one note to remain untied, you will need to give it the opposite tail to the tied notes or use an 'alternative' cluster

The tie stretches from the cursor position as far as the next note with the same tail or the next note on the same line, whichever comes first. This rule copes with the majority of situations but there are times when the tie stretches to the note beyond as in the example below. In cases like this, use 'alternative notes'.

Ties can be selected at the same time as notes using Adjust.

Normally, ties bend away from the tail, but in two part music they bend towards the tail. This convention does not always apply, however, particularly with chords where the top note can bend in the opposite direction to the others. If you do not like the default direction chosen by Rhapsody you can change it. See the description of the Reverse tie icon on page 92 for more details.

A slur across two or more notes is an indication to the performer to play the notes smoothly. This is indicated in the score like this:

Only the notes indicated with a * have been given a slur. Notice that the last note of each group does **not** have a slur, because it is not slurred to the following note.

Slurs can also be entered using Block ▶ Part style ▶ Slurred. See page 121 .

There are occasions when Rhapsody may not position the slur in quite the best place. If appearance is important, use a phrase mark instead. (See page 66).

When slurred notes are played, they are lengthened slightly so that the notes overlap. Normally this makes no difference at all to the sound of the notes but many MIDI instruments have a feature called 'Fingered Portamento'. If the voice you are using has this feature switched on then the next note will join on smoothly to the previous one without restarting a new note. This feature is really only of use with instruments which can sustain a note, like strings and wind instruments.

Accents

Rhapsody supports seven types of accent, six of which are definable, that is, they can have their own length (in terms of the length of the original note) and dynamic. By default the accent symbols alter notes in this way:

Staccato	50% length	No change to dynamic
Spiccato	30% length	No change to dynamic

Tenuto	80% length	Played 10% louder
Accent	Full length	Played 30% louder
Stressed	Full length	Played 10% louder
Sforzando	Full length	Played 40% louder
Forte-piano	(played as normal)	

To define how an accent is played, place a *trill/accent definition* object in the score before the accent. This definition will apply to all trills and accents until the next trill definition is encountered. See *Trill definitions* on page 84 .

Accents can be placed on any note but they alter the length and loudness of the whole note cluster (i.e. note or chord) that they refer to. If you want one note in a chord to remain unaccented, you will need to give it the opposite tail to the other notes, or use *'alternative notes'*.

If the cursor position is not exactly on a note when the accent is inserted, Rhapsody will place the symbol on the nearest note.

Accents can be selected at the same time as notes using Adjust.

A whole block of notes may be accented, or silenced completely, using Block ▶ Accents ▶ (see page 120).

Phrase marks, Hairpins, Lines and Brackets

Phrase marks are used to group together notes into musical phrases. They are for the player's guidance only and have no effect on how the score is played by Rhapsody. They are however an important aspect of a well printed score and should not be omitted.

Any number of phrase marks can be placed in any slot, at different heights. To insert a phrase mark, select the phrase mark symbol (the one shown selected in the illustration above), place the cursor in the score at the appropriate position with the red arrows at the right height and click on the Insert-at icon with either Select or Adjust. Select inserts a phrase mark which bends upwards while Adjust inserts a downward bending mark. There is, however, no lasting distinction between the two and both can be altered in any way you like. This is done by dragging the beginning, end and control points about the score. The control points work exactly like those in !Draw. A little bit of experimenting will show what they do.

To drag either of the end points, click with Select over the solid blue point and hold the mouse button down until the pointer changes shape; then drag the point to

the place you want it to go to and release the button.

The control points (blue outline circle) are dragged in exactly the same way except that if the control point is a long way from its parent 'end' point, sometimes Rhapsody is unable to find it. Indeed, if you drag a phrase mark close to the edge of a score the control points can sometimes end up outside the limits of the score. If this happens, you can always find the control point by holding the Shift key down and dragging the beginning or end point. The pointer will immediately jump to the control point even if it is off the score.

To delete a phrase mark, place the cursor on the beginning point and then delete it using whichever action is appropriate for the current editing mode. If there is more than one phrase mark in the slot, Rhapsody will delete the nearest.

Hairpins are used to represent gradual changes in dynamic. The open end represents the louder sound. However, Rhapsody does not take account of hairpins when playing a score, as the hairpin itself does not indicate how much of a crescendo or diminuendo is required. To enter a gradual change in dynamic, you can either use a series of hidden dynamic markings (see *Dynamics*, page 71); or you can use a gradual change in volume (see *Tempo changes and volume changes*, page 87). The former method is preferred in piano music because the dynamic symbols alter the strength with which the note is struck. In organ or string music, however the latter method is better because the crescendo will continue throughout the length of the sustained note.

Hairpins are entered, edited and deleted in exactly the same way as phrase marks. Using Select inserts a crescendo hairpin, Adjust a diminuendo hairpin. Hairpins do not, of course, have any control points.

The third member of this group enables you to insert a simple line into a score. Use of the Select button will produce a solid line; Adjust will produce a dotted line. The main use for this feature is to indicate where a part (usually in a piano score) changes from one stave to another. Here is a fragment from a score which uses phrase marks, hairpins and a line:

The Square bracket is used for a number of purposes. It can be used to bracket optional notes or passages and sometimes the left hand bracket is used to bracket notes in adjacent staves which are connected in some way eg by being played with the same hand. eg:

The left hand bracket is inserted using the Select button and the right hand bracket with the Adjust button.

When you have inserted the default bracket, you can drag the blue control spots anywhere you like. When you drag one end, the other end remains vertically aligned with it.

If you want to make a bracket extend outside the limits of the stave that it is on, note that that once you have released the control spot somewhere off the stave, you will not be able to find it again, because the cursor will move to the new stave, which is not where the bracket was added. It is a good idea therefore to move this end first so that you can still adjust the bracket with the other end. If you lose both ends of the bracket, the only thing to do is delete it and start again.

Pedal marks and Octavo marks

Pedal marks refer to the use of the sustain pedal in keyboard music; when the pedal is depressed, all notes are sustained as if tied indefinitely, and when it is lifted, those notes are damped as normal. Some composers also place 'hanging ties' from notes, sometimes accompanied by the directions *let ring* or *laisser vibrer*, to denote the use of the sustain pedal.

Rhapsody uses three distinct markings:
- the start pedal mark, ℘ or ℘ _____
- the end pedal mark, ✳ or _____⌐
- the new pedal mark, where the pedal is lifted to damp all sustained notes and immediately pressed again; ✳ ℘ or ___∧___

Each stave can have one pedal marking in each slot, although MIDI only allows one sustain pedal per channel (sensibly enough); if Rhapsody comes across staves on the same channel with conflicting pedal markings, it may become confused and play the score incorrectly.

Inserting a pedal marking with Select causes it to appear in the default position for these markings; using Adjust allows you to specify the height up the stave at which the pedal marking is printed, which is useful if very high or very low notes are required to fit between the marking and the stave. You can drag the pedal marks up and down after they have been inserted, or shift pedal marks within a block selection (see page 118).

Inserting a pedal mark with the CTRL key pressed inserts a global pedal mark - ie one that applies to all the staves.

Octavo marks denote that the passage inside the marks is to be played either one octave above or one octave below the way it is written. This is often used in passages which would otherwise have unsightly quantities of leger lines. The beginning and end of an octavo section are inserted separately.

If the cursor position is below the central line of the stave when the octavo marking is inserted, an 'octave down' octavo marking is inserted; otherwise, an 'octave up' marking is inserted.

Inserting an octavo marking with Select causes it to appear in the default position for these markings; using Adjust allows you to specify the height up the stave at which the octavo marking is printed, which is useful if very high or very low notes are required to fit between the marking and the stave. You can drag octavo marks up and down after they have been inserted, or shift octavo marks within a block selection (see page 118).

Acciaccaturas and appoggiaturas

Also known as crushed notes and grace notes, these symbols instruct the player to insert a short note which does not count towards the timing of the whole bar. Acciaccaturas (pronounced *a-chack-a-tura*, not *a-catchy-a-tura*) are distinguished by a line through their stalks and are played as quickly as possible. So, for example

would be played something like

Appoggiaturas are shown as small versions of that note with half the length of the parent note, and play as that length; this means that the parent note is also halved in length.

Grace notes can be played either **on** the beat or **before** the beat. In order to set this option a pair of additional icons appears in the panel when you select either of the grace notes symbol.

- Before the beat vs. On the beat. When the first of these is selected the grace note takes time from the previous note so that the parent note begins at its proper time; likewise, if the second is selected, the grace note starts on the beat and the parent note is delayed. Appoggiaturas are normally played on the beat; acciaccaturas are found in either position.

- Run vs. Chord. If there is more than one grace note attached to the parent note, Rhapsody can interpret them in one of two ways; either they can be played consecutively (Run), or all at once (Chord). These options allow you to select between the two. Note that when Run is selected, notes are played (and displayed) in the order in which they were inserted.

Grace notes can be inserted and deleted just like any other note; if there is already more than one note present in the slot, the parent note is taken to be the nearest note. (If you need to add a grace note to the further of two notes, you will have to delete the nearer note, add the grace note then reinsert the first note.) You cannot add a grace note if there is no parent note for it to be attached to. (Be careful not to add more grace notes to a grace note chord than you intend to. Because the notes will be printed on top of one another, the additional notes will effectively be invisible.)

Dynamics

There are sixteen dynamic levels, including silence (*Tc* or tacet). A dynamic level with a dash represents a volume slightly louder than the undashed level. Dynamics alter the key velocity when played over MIDI - thus, louder notes may acquire a harsher tone, as you would expect from a real instrument. MIDI makes a clear distinction between key velocity and volume; to play a note at a particular volume without changing the quality of the sound, use the Volume change group icon (see page 87). By varying the relative volume and dynamic, you can achieve some interesting effects.

You may not want all dynamics to be printed. For example, you can simulate a crescendo or decrescendo using dynamics, which will have the advantage (over a gradual volume change) of using the key velocity to create a more realistic effect. However, the series of dynamic changes should only affect how it is played. To 'hide' a dynamic from being printed, click on the 'Don't print' option which appears when the dynamic is selected.

Inserting a dynamic marking with Select causes it to appear in the default position for these markings; using Adjust allows you to specify the height up the stave at which the dynamic is printed, which is useful if the normal position is obstructed.

Note that because of the response of the human ear, a change in dynamic near the loud end of the scale may appear to have less effect than the same change near the soft end. The range MIDI uses for dynamics is between 0 and 127; you can counteract this effect to some extent by changing how the 16 dynamic markings used in Rhapsody relate to the MIDI values. To do this, use the *dynamics map* available by selecting Preferences... on the iconbar menu and clicking on the Dynamics tab. For more information see page 140.

Common directions

A selection of common directions are provided in the font styles normally used for them:

cresc. decresc. dim. **accel. rit. rall.** pizz. arco

cresc.	Crescendo - getting louder
decresc.	Decrescendo - getting softer
dim.	Diminuendo - 'diminishing', i.e. getting softer
accel.	Accelerando - getting faster
rit.	Ritenuto - held back
rall.	Rallentando - getting slower
pizz.	Pizzicato - plucked
arco.	Arco - bowed

Inserting one of these directions with Select causes it to appear in the default position for these markings; using Adjust allows you to specify the height up the stave at which the marking is printed, which is useful if the normal position is obstructed.

These directions are *not* the same as ordinary text, even though at present they do not affect the way the score is played. Future versions of Rhapsody 4 may use these directions to help it play more realistically; whereas text will always be ignored by the play routine. You are advised to use these directions when you can, so you can take full advantage of these features when they are implemented.

Pauses and breath marks

Pauses tell the player to play the note, rest, or space between bars indicated by the pause mark, for longer than normal; breath marks suggest places for vocal or wind parts to breathe, or have a similar but less marked effect to pauses. (See also the caesura, under *Barlines* on page 59).

Inserting a pause or breath mark with Select causes it to appear in the default position for these markings; using Adjust allows you to specify the height up the stave at which the marking is printed, which is useful if the normal position is obstructed. You can only have one pause or breath mark per slot on each stave, regardless of whether there are two or more parts; because they refer to changes in tempo, all parts should pause at the same time. An exception to this occurs when one part carries on for a note or two longer as in the example below.

This example also illustrates the use of the inverted pause beneath the piano stave.

It is impossible for Rhapsody to know exactly how to interpret pauses and breath marks but as a first approximation, slots which contain a pause are doubled in length and a breath mark is played by cutting short all the notes in the slot without change of tempo. These effects may be modified by the use of the volume and tempo effects described on pages 87 and 88).

Bowing marks and Harmonics

The down bow and up bow markings refer to the direction of movement of the bow of a stringed instrument; generally, down bow notes can be produced with greater attack, up bow notes can be produced with more precision.

Inserting a bow marking with Select causes it to appear in the default position for these markings; using Adjust allows you to specify the height up the stave at which the marking is printed, which is useful if the normal position is obstructed.

There does not have to be a note in a slot in order for there to be a bow marking; this is so that long notes can have bow changes marked halfway along. You can only have one bow marking in a slot, so separate parts on the same stave must use the same bowing.

The harmonic marking ° denotes that the note should be played in a way which gives a much purer sound. In string and guitar playing this often involves using non-intuitive fingerings, and there is sometimes a choice, leading to harmonics of subtly different timbre. However, many instruments cannot produce harmonics at all.

Harmonics can be written in two ways. Either the note sounded is written with a harmonic marking, and it is left up to the player to decide which method to use to play the harmonic:

or both the note fingered and the note sounded are written out, normally with different note heads:

This example shows how a top E is produced on the A string of a violin by pressing lightly on the lower E.

A harmonic marking can be inserted wherever there is a note. If the cursor position is not exactly on a note, Rhapsody will place the symbol on the nearest note. If the cluster containing the symbol consists of more than one note, the harmonic is added to the whole chord. Separate harmonics can, however, be added to notes of different tails in the same slot.

The two previous examples illustrate what are called natural harmonics. This is because they are produced by lightly pressing an otherwise open string. Artificial harmonics are produced in the same way but the string is also stopped. Here is an example of a series of artificial harmonics played on a violin:

The lowest note (with a normal note head) is the one which is actually fingered; the middle note (with the open diamond head) is lightly pressed with another finger while the top note (with a small note head) is the pitch which is actually produced. The top note is often omitted, particularly if it is too high.

Repeat bar sign

The repeat bar sign is frequently used in band music to indicate that a bar is to be repeated several times. Rhapsody will play it as intended.

Glissando

This symbol (which is just a line joining one note to another) tells the player to fill the gap between two notes with all the intervening notes played in quick succession. This is accomplished smoothly where possible, for example on stringed instruments, the trombone, some wind instruments, and timpani; otherwise, all the notes are played separately, for example on the piano or harp. (Rhapsody plays a chromatic scale between the two notes.)

A glissando can be inserted wherever there is a note. If the cursor position is not exactly on a note, Rhapsody will place the symbol on the nearest note. Glissandi are placed so as to reach from one note to the next note of the same tail. If the cluster containing the symbol consists of more than one note, the glissando takes effect on the top note only. Separate glissandi can, however, be added to notes of different tails in the same slot.

Spread chords

These tell Rhapsody to play the notes in a chord in a staggered fashion, producing a softer, wave-like effect. There are two symbols, the second of which shows arrow-heads denoting the direction of the spread; Rhapsody makes no difference between the two when playing them.

When a spread chord symbol is selected, a number of options appear in the panel:

Speed 8

- Enter a value into the Speed writable icon, or use the bump arrows, to change the speed at which the chord is played, that is, the amount by which the notes are staggered. The speed is measured in notes per crotchet. The default value of 8 therefore represents a demi-semiquaver. The higher the number, the faster the notes are played.
- The next pair of icons determine whether the spread is performed *before* the beat or *on* the beat as indicated by the vertical line.
- The last two icons alter the direction of the spread; bottom-to-top or top-to-bottom. This option affects the positioning of the arrowhead, if that symbol is selected.

A spread chord direction can be inserted wherever there is a note. If the cursor position is not exactly on a note, Rhapsody will place the symbol on the nearest note. If the cluster containing the symbol consists of only one note, the direction is still placed there and printed as such, but it has no effect when played. Separate spreads can be added to chords of different tails in the same slot.

In piano music, a particularly pleasing effect can be achieved by using a spread chord across two staves if the lower chord is set to play *before* the beat while the upper chord is set to play *on* the beat. The effect is one of a single chord played *across* the beat.

Tremolo markings

These tell Rhapsody to play a long note as a repeated series of shorter notes, to give a tremolo effect. It is a useful shorthand. The single bar tremolo plays repeated quavers; the double bar plays repeated semiquavers, and the triple bar, repeated demi-semiquavers. For example:

plays like this:

The twin tremolo is usually only applied to pairs of minims or longer notes in which case it plays the two notes alternately as repeated quavers. For example:
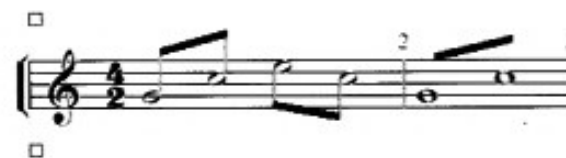
will play like this:

(If a twin tremolo mark is applied to a crotchet or quaver, Rhapsody will play a faster tremolo but the tremolo beam is not printed as it would look like an ordinary beam. A tremolo bar is printed above or below the note instead.)

A tremolo marking can be inserted wherever there is a note. If the cursor position is not exactly on a note, Rhapsody will place the symbol on the nearest note. If the cluster containing the symbol consists of more than one note, the tremolo is played using the top note only; further tremolo markings cannot be added to that cluster. Separate markings can, however, be added to notes of different tails in the same slot.

Trills and decorations
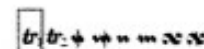
Decorations are additional short notes played quickly at the beginning or end of a note, and denoted by a special symbol. Trills, or shakes, instruct the player to replace a note with a series of notes played very fast, and may include a decoration. The notes used are always restricted to the parent note itself and those notes immediately above and below it in the scale. Other notes must be specified using acciaccaturas and appoggiaturas (see page 69).

In the days of harpsichords, using a trill was the only way to sustain a note for any length of time; in modern music trills and decorations are used for special effects and to give a classical or folky feel to music.

Rhapsody provides eight different trill symbols. At the start of a piece they are defined in such a way as to play as follows:

Romantic trill

Romantic trill with turn

Upper mordent

Baroque upper mordent

Lower mordent

Baroque lower mordent


Turn

Inverted turn

A trill or decoration can be inserted wherever there is a note. If the cursor position is not exactly on a note, Rhapsody will place the symbol on the nearest note. If the

cluster containing the symbol consists of more than one note, the trill is played using the top note only; a new trill cannot be added to that cluster. Separate trills can, however, be added to notes of different tails in the same slot.

It is very unlikely that these default definitions will always be suitable for the style, period, etc. of music you are writing, so each of the eight trills can have its own note sequence and speed. To define how a trill is played, a trill definition object must be placed anywhere in the score before the trill. This definition will apply to all trills and accents until the next trill definition is encountered. (see *Trill and accent definitions*, page 84). Note that redefining a trill only affects the way it is played, not its appearance in the score.

Segno, coda, da capo, and fine

These are used to determine the large-scale repeated structure of a score. There are three ways of using them:

- the segno, 𝄋 , is placed at some point in the score. When the direction *DS* (*dal segno*) is encountered during playing, the score skips back to the *Segno* and plays from there. If the *DS* marking was a *DS al fine*, then in addition to this the score will stop playing altogether when Rhapsody subsequently encounters the *Fine* ('end') marking.

- the coda wheel, ⊕ , is placed at some point in the score. When either of the directions *DS* or *DC* (*da capo*) is encountered during playing, the score skips back to either the *Segno* or the beginning of the score (in the case of *DC*). Subsequently, when the coda wheel is reached the score skips forward to the coda, which is marked with the ⊕ *Coda* direction, and stops when the end of the coda is reached. In the following example, Rhapsody plays the first two bars, returns to the *Segno* sign and plays bar 1 again but then skips to bars 4, 5 and 6.

- the *DC* or *DC al fine* marking is placed at the end of the score. When it is encountered the score skips back to the beginning and plays through the whole thing again. If the *DC* marking was a *DC al fine*, then the score stops playing altogether when Rhapsody subsequently encounters the *Fine* marking. In this example, all three bars are played twice, then the first bar is played once more.

8. Additional symbols

In all cases, these markings are only followed if the Repeats option is on (select Play options ▶ Repeats on the main menu to toggle this option.) If the Repeats option is on, they will be followed, and the second time round (after the *DC* or *DS* instructions), normal 'barline' repeats are ignored. Thus in a score like:

the repeated sections are played twice before Rhapsody encounters the *DC*, but only once afterwards. In other words, Rhapsody will play **AB AB CD CD ABCD**.

Inserting a marking with Select causes it to appear in the default position for these markings; using Adjust allows you to specify the height up the stave at which the marking is printed, which is useful if the normal position is obstructed.

Suppress triplets and Suppress accents

The last two symbols in the window are rather different. Each inserts a flag into the score which stops Rhapsody from printing triplets or accents from there on. This is useful when, for example, a triplet figure is repeated over and over again or where virtually every note is staccato.

The flags are indicated in the score by a large square bracket, red for suppress triplets, green for suppress accents.

To restart printing of triplets or accents insert the appropriate symbol using the Adjust button.

9. Other objects

In this chapter we shall describe the other seven panel mode selection icons.

Voice changes VC

Voice changes are messages sent to the MIDI interface, or to the internal sound system, to start playing a stave using a different sound. When the voice change icon is selected, the symbols window is replaced by a new set of icons:
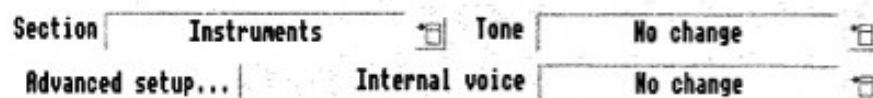
Modern MIDI instruments offer many hundreds of tones to choose from. At the highest level, these are divided into what Rhapsody calls *Sections*. Typically, these include an instrumental section, one or more percussion and/or sound effects sections. If you click on the Menu button to the right of the Section icon, a menu will appear for you to select from.

At the next level down, each section contains up to 128 tones, each of which may be further subdivided. For convenience, the 128 basic tones are divided into a number of *groups* eg Piano tones, string tones etc. Furthermore, each tone may be divided into a number of subtle modifications to the tone. Clicking on the menu button to the right of the Tone icon leads to a multi-level menu which allows you to select the right sound.

The contents of these menus are determined by the files present in the MidiSetup directory inside Rhapsody. Some MIDI instruments, particularly older ones, do not use *Sections* at all; accordingly, the icons may be greyed out according to which MIDI instrument is assigned to the current port and channel. All of this information can be altered to match your own particular setup: see the chapter on *Customising Rhapsody*, page 137.

In making these two selections, what you are in fact doing is choosing three numbers which in MIDI jargon are called the program change number, the MSB bank change number and the LSB bank change number. If you are into this sort of thing (or if you are creating a score for a setup without a MidiSetup entry), you can set these numbers directly by clicking on the Advanced setup icon. For more detail on this, see page 107.

Changing the Internal voice setting is much easier. The menu button produces a list of all the voices currently installed from which you can make your selection

For either the MIDI tones or internal voices you can select No change. As implied, this setting will not alter the current tone or voice. If both the icons read No change this will create a voice change message telling the computer to do nothing at all. This is not very useful, but Rhapsody will not complain.

You cannot change the MIDI port or channel using a voice change message. If you need a new channel, you should create a new stave to contain the information. This also helps to keep scores understandable; if you find yourself using a lot of voice change messages without using all the available channels, consider separating some of them off.

Once you are satisfied with the voice change, use the Insert-at icon to place it into the score if in cursor edit mode, or place it directly if in drop mode. (Voice changes cannot be entered in quick edit mode.) A slot must exist already to contain the voice change message; you cannot use the Insert-after or Insert-before icons.

Text

There are many kinds of text on a typical score. Directions, lyrics, notes on how to play particular passages, all require the ability to place text anywhere on a stave.

When you click on the Text group icon, the symbols window is replaced by a panel of icons:

Auto spaced | Common terms | Styles | ♪ ♪. ♩ ♩. ♩ ♩.
Fetch |
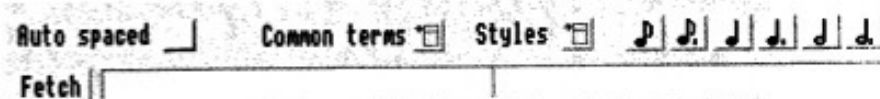
To enter text into the score, type it into the large writable icon and insert it in the normal way. Text is always placed at the height of the red cursor arrows. Text can be inserted onto any or all of the lines of a stave (though attempting to insert text at the same height as existing text will replace the existing text). In practice this means that there is enough room for up to six lines of text either above or below each stave. Text can be dragged around the score once it is inserted.

To enter lyrics into a score, first click on the Auto spaced icon. Then place the cursor at the appropriate starting position and type in the text a word or syllable at a time, pressing Return after each word. This will enter each word into the next slot, opening up the slot automatically if needed. Barlines will be skipped over automatically. If you need to skip over a slot or several slots for any reason, simply press Return as many times as required.

While the caret is occupied within the writable icon the cursor keys no longer move the cursor, they move the caret. It may still be convenient, however, to be able to move the cursor forwards and backwards within the score without having to use the mouse. This can be done by using Ctrl-Shift- with the left and right cursor keys.

It is also convenient to be able to turn Auto spacing on and off without using the mouse. This is done using the Tab key.

To insert a note into a string of text (e.g. for tempo directions) you can
● click on one of the note icons in the panel; a complicated string appears representing the note in Rhapsody's internal format
● enter the string yourself using the internal format; see below for details. This is more flexible in that any string of musical symbols can be entered.

Clicking on the Common terms menu icon brings up a menu of commonly-found musical terms in various languages, for convenience. When any of these are selected, the term is inserted into the text at the caret

Clicking on the Styles menu icon brings up a menu allowing you to change the text style used for all or part of your text. When any of these are selected, a string of characters is inserted into the text which instructs Rhapsody to change the font style.

The internal text format is as follows:

● All characters in the string are displayed except for the back slash \. To enter a back slash into text, use two \\. When using the PMS fonts, it may be helpful to run the application !Chars to display the font so that you can tell which symbols correspond to which letters.

● After a back slash, the next character tells Rhapsody to switch into a different font. Capital letters always refer to normal-size text; small letters, to smaller text. The font selection is,

\N, \n	Normal text	(*Trinity.Medium*, by default)
\B, \b	Bold	(*Trinity.Bold*)
\I, \i	Italic	(*Trinity.Medium.Italic*)
\D, \d	Bold italic	(*Trinity.Bold.Italic*)
\M, \m	Music font	(*PMS.Music*)
\A, \a	Musical alphabet	(*PMS.Alpha*)
\H, \h	Sans-serif	(*Homerton*, by default)
\G, \g	Sans-serif, bold	(*Homerton.Bold*)

When entering text using the menus or buttons, make sure that the caret is in the writable icon otherwise Rhapsody will not be able to insert it there.

You can change the basic fonts used for normal and sans-serif text. See page 134 for more details. To obtain the high quality on screen and printout Rhapsody 4 uses the PMS musical fonts, which are installed for you when you install Rhapsody.

If you wish to edit some text already present in a score, place the cursor over the text you wish to edit and press the Fetch icon. Make the necessary changes and press Return.

Trill and accent definitions

There are eight trills available in Rhapsody, and six kinds of accent. Each of the eight trills can have its own note sequence and speed; likewise, each of the six accents can alter its parent note in speed and attack. There are default settings which correspond to the appearance of the trill or accent on the score, but these may not be correct for the style, period, etc. of music you are writing.

Placing a trill/accent definition object in the score changes Rhapsody's settings, so that trills and accents will be played in that particular way until the end of the score, or until a new definition is encountered. The definition object does not affect how a score looks on screen, or how it is printed.

Clicking on the trill/accent definition group icon replaces the symbols window with the following set of icons:
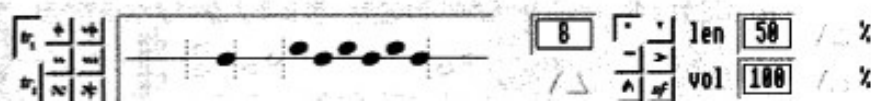
● Click on one of the eight small trill icons (to the left of the panel), or one of the six small accent icons (to the right of the panel), to define a different trill or accent.

Defining a trill

First select the appropriate trill from the eight trill icons on the left.

● Normally, Rhapsody will play one note up or one note down the musical scale - ie it takes into account the key signature and any accidentals which have preceded the trill in the bar. If you wish to sharpen or flatten the upper or lower note, cycle through the accidentals on the left of the white panel with Select or Adjust.

Remember that this will affect only how the subsequent trills are *played*. If you need to change one trill only, you will have to insert a second trill definition after the trill to reinstate the original settings. This is easy to do because whenever you open the trill definition window, (or whenever you click on the trill definition icon in the main panel) Rhapsody picks up the *current trill definition*. So to copy a trill definition, place the cursor anywhere in the score where that definition is current, click on the trill definition icon, move the cursor and click on Insert-at.

Often, to indicate that a trill must be played with a sharpened or flattened note, a small accidental is placed above (or below) the trill sign. There is no special facility for doing this but an effective work-around is to use a text object containing one of the following strings:

\a#   for a sharp
\a$ for a flat
\a%   for a natural.

● Clicking on the four right-hand areas of the white panel controls which notes are played, and in what order; each area either toggles between played and not played, or cycles between a number of options. Notes shown in black are played, and if the long sequence contains three shakes, this is a shorthand for 'continue the trill for the length of the note'. Most trills are possible in this fashion eg:

> - a trill starting on the note;
> - a trill starting on the note above;
> - a trill starting on the note below;
> - trills with one, two or continuous shakes
> - a trill with a final turn at the end.

Here are some examples
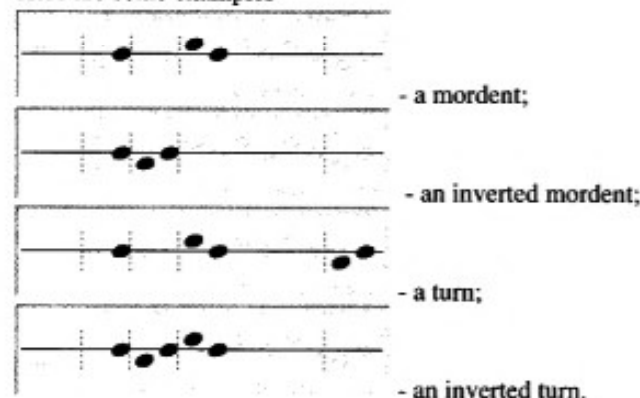
- a mordent;

- an inverted mordent;

- a turn;

- an inverted turn.

● Enter a value into the **Speed** writable icon, or use the bump arrows, to change the speed at which a trill is played. The speed is measured in notes per crotchet; the default, 8, represents a demi-semiquaver. The larger the value, the faster the notes are played.

Defining an Accent

● Enter a value into the **Len** writable icon, or use the bump arrows, to change the accent length. A length of 50% will cause accented notes to be played to half their written length (followed by a rest). There is a nominal limit of 120% on the length.

● Enter a value into the **Vol** writable icon, or use the bump arrows, to change the accent volume. A figure of 120% would mean that this note is played 20% louder. There is a nominal limit of 200% for this value. If the note is already being played at full volume, accenting it will have no effect.

Guitar chords

Rhapsody has a flexible facility for entering guitar chords, which it can also play. When the Guitar chords group icon is selected, the symbols window is replaced by a representation of the fingerboard of a guitar, with the head at the top:
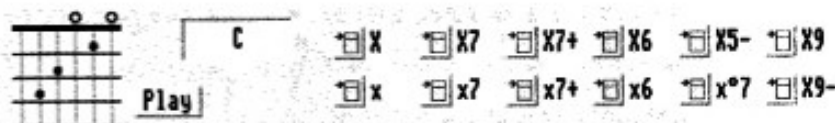
To select a guitar chord, you can:

● click on one of the menu icons to use a standard chord. Rhapsody has a library of 144 built-in chords which you can use and reconfigure. Each menu button gives access to a menu which lists all 12 keys. When you select a key, the appropriate chord is entered into the fingerboard map which you can then edit if you wish. 12 different chord types are provided as follows (X is the key):

X	X major
x	X minor
X7	X (dominant) seventh
x7	X minor (dominant) seventh
X7+	X major with added major seventh
x7+	X minor with added major seventh
X6	X major with added sixth
x6	X minor with added sixth
X5-	X major with flattened fifth
x°7	X minor with flattened fifth and diminished seventh
X9	X major with added seventh and ninth
X9-	X major with added seventh and flattened ninth

● create a new chord or alter an old one, by clicking on the fingerboard picture. Strings which are played are marked with a red mark. Clicking Adjust on a red mark removes that mark, so that the string is not played at all. Open strings are denoted by a circle as in printed chords.

When the chord is correct, you can change the name of the chord by entering a new name into the writable icon. This name is printed over the chord in the score; it can be blank if you like.

To hear what the chord sounds like, place the cursor on a suitable stave (this tells Rhapsody what voices to use) and press the **Play** icon.

Once you have the guitar chord you need, insert it as normal using the **Insert-at** button. Guitar chords are designed to go on their own stave; this is normally what you would want, as they represent a separate instrument from the tune. To create a new stave suitable for guitar chords choose **Stave ▶ Add stave ▶ Blank** from the main menu.

Tempo, volume and expression changes

These three functions use the same sub panel because they are similar in layout. If you click on the tempo/volume icon with Select, the tempo window appears. If you use Adjust, the volume window appears. You can swap between all three modes by clicking on the relevant icon in the panel below. To reach the **Expression** window click either button and click on the **Expression** icon (symbolised by a conductor's baton). This is the tempo window:
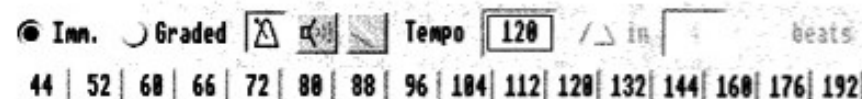
To insert a tempo change into your score, you can:

● enter a value into the **Tempo** writable icon, or use the bump arrows, or click on one of the range of icons below it to alter the target tempo or volume.

● click Imm(ediate) to select a change with instant effect. During playing the speed or volume will change to the target level as soon as Rhapsody encounters the instruction.

● Click Graded, and enter a value into the **In ... beats** writable icon (or use the bump arrows) to select a gradual change from the current tempo to the target.

Once you are satisfied, insert the item as normal. Tempo changes always apply to the entire score.

Tempos are measured in crotchets per minute. Thus a piece in 6/8 with a tempo direction of 144 will play at the same speed as a piece in 3/4, or one in 12/16.

The volume change window looks like this.
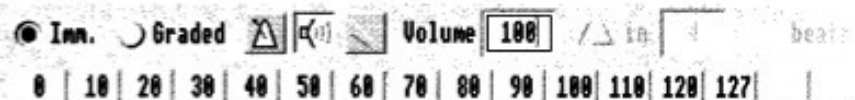
Volumes are measured in terms of the loudest note possible on your instrument, which is given an arbitrary value of 127. The default value is 100, so you can think of the scale as a percentage plus a bit 'extra' for loud passages. MIDI makes a clear distinction between volume and key velocity; to alter the key velocity (and hence the sharpness of the note as well as its loudness), you should use dynamics (ie *pp* and *mf* etc.). Note that because of the response of the human ear (and most amplifiers), a change in volume near the loud end of the scale appears to have less effect than the same volume change near the soft end.

Volume changes can either apply to one stave only or all the staves. To apply a volume change to one stave only, insert with the Select button; to apply the change to all staves, use the Adjust button to insert the symbols. Local and global volume changes can occur separately in the same slot. When deleting a volume change, be sure to use the correct button Select for a local change, Adjust for a global one.

Tempo and expression changes can only be applied to all the staves together.

The expression change window looks like this:
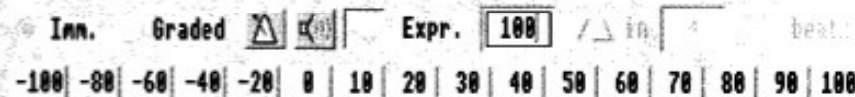
Expression alters the tempo within each bar. Positive values speed up the tempo in the middle of the bar and slow it down at the end and beginning. This is very effective in romantic music such as Debussy's arabesques. Negative values speed up the beginning and end and slow down the middle as in a Viennese waltz.

Expression is measured in arbitrary units which can be regarded as a percentage of its default value. The value in the score is multiplied by the value set in the play options window to give the actual value used. For example. if the play option value is set to 50% and the value in the score is set to 50%, the actual value used

will be 25%. By default, the starting value in every score is 100% so you can play any score, even if it has no expression commands in it, with any degree of expression by setting the play options value appropriately. In general, therefore, when entering expression into a score, you can stick to 100% for expressive bars and 0% for the rest, then set the actual level of expression used from the play options window.

MIDI events

The next icon allows Rhapsody to issue a MIDI command at any point in a score. Its window appears below:
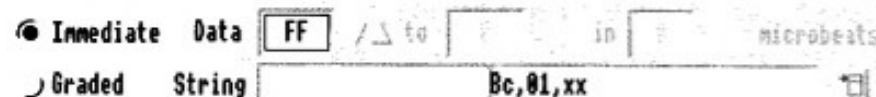
Like the tempo and volume windows, it has a pair of radio icons which permit you to insert either an immediate or a graded effect. In the example shown above, the MIDI command which is to be sent is written as Bc,01,xx. The specifies three data bytes in hexadecimal notation. The lower case letters are substituted for numbers when the score is played. 'c' stands for the current MIDI channel, which is determined by the MIDI channel allocated to the stave at the time. 'xx' stands for the data value we are setting in the icon above, which in this example is FF (in hex, or 255 - the highest value a data byte can take). Assuming that the stave on which this command was inserted was set to channel 1, the actual data bytes transmitted would be (in hex) B0 01 FF .

The example above shows how a single command can be sent - in this case the setting of the 'modulation wheel'. Other commands need to be sent in a graded manner. Pitch bend is a good example. To set up a pitch bend message which will slide up about a tone to the correct pitch over a period of one quaver, the following settings would be used:
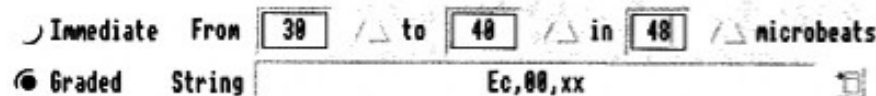
By convention, a pitch bend value of 40 (hex) equals true pitch. How much the pitch is altered by other values depends on settings within your MIDI instrument and some experimenting may be required to get the right effect. Values less that &40 lower the pitch, values more than &40 raise it.

Whereas tempo and volume changes take place over several beats, pitch bend messages must be sent more quickly. The time period is therefore given in microbeats - where there are 96 microbeats to the crotchet.

Some MIDI events require the use of 14 bit numbers. These are indicated in the command string as follows. Ec,I l,hh. When the command is played, the lower 7 bits are put in I l and the upper 7 bits in hh.

If all this business about hexadecimal numbers is beyond you, help is at hand. At the right hand side of the window is a menu button which lists some of the more common MIDI commands which will be entered into the command window in one go. If you are a real MIDI buff, you can even edit the file which controls this menu and add your own commands.

Please note that the MIDI command structure is not one imposed by Rhapsody but is a universal protocol, albeit rather cryptic.

There is one command which it is very useful to have in your list and that is a system reset command. Unfortunately, this command is different for every manufacturer but it will be quoted somewhere in your MIDI manual.

Adjustment group

The last group icon differs from the others in that it does not contain any objects which can be inserted into the score. When this option is selected, the symbols window is replaced with a panel containing a number of further sets of action icons:
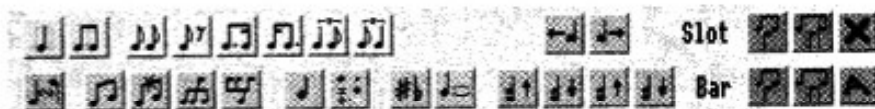
The orange join notes icon considers the note under the cursor and *the next appropriate note or rest*, and if it can, puts them together as a single, longer note. Thus two crotchets would be added together to become a single minim; a crotchet followed by a quaver rest would become a single dotted crotchet. A combination such as a crotchet followed by a semi-quaver cannot be added together. If you use the Select button, only the time value of the second note is added to the first; if you use the Adjust button though, any different *notes* in the second cluster will be added to the first cluster.

The orange split notes icon considers the note under the cursor and splits it into

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two notes which add together to make the same length as the original. A crotchet will be split into two quavers for example but a dotted crotchet will be split into a crotchet followed by a quaver.

The yellow alter rhythm icons adjust the rhythm of the cursor slot *and the next appropriate note or rest*. The examples on the icons themselves show what would happen to a pair of notes whose combined length adds up to a crotchet, if that action were performed on it. For example, if you place the cursor on the first of two quavers and then click on the icon illustrated, the first quaver would become a dotted quaver and the second quaver would become a semi-quaver. Note that if you want to turn a crotchet into a dotted rhythm, you must first split it into two quavers and then click on the alter rhythm icon.

The blue and green icons across the bottom perform some miscellaneous actions; from left to right:

Click Swap tails to reverse the direction of the note tails under the cursor. If clicked using Select it swaps the tails of all notes in the cursor slot; if clicked using Adjust it swaps only the tail of the note underneath the cursor (that is, the red arrows.)

Click Select on the Force beam icon to force Rhapsody to create a beam between notes, even if it does not normally put one there. Beams can even be forced across a barline if required. Click Adjust to remove the effect.

Click Select on the Break beam icon to force Rhapsody to break a beam between notes. In vocal music it is normal to break beams between notes if they are to be sung to different syllables. Click Adjust to remove the effect.

Force beam and **Break beam** act on the beam immediately following the cursor, that is, from notes underneath the cursor to notes to its right. It is applied to the nearest note in the slot.

You can force or break all the beams in a marked block by choosing **Block ▶ Part style ▶ Force beam** and **Block ▶ Part style ▶ Break beam**.

Click Select on the Beam to note above icon to force Rhapsody to join this note to the appropriate note on the stave above. Click Adjust to remove the effect.

Click Select on the Beam to note below icon to force Rhapsody to join this note to the appropriate note on the stave below. Click Adjust to remove the effect.

Note that you must position the cursor on the note *before* the one on the new stave and that to achieve the effect illustrated below, the note marked with a * has a 'Beam to note above' flag and the note marked with a + has a 'Beam to note below' flag.

Click with Select on the Alternative note icon to turn the cluster with the note nearest the cursor into an alternative note. See page 55 for more details on how to use alternative notes. Click Adjust to turn an alternative note into a normal note.

Click with Select on the Notestyles note icon to cycle through the available styles of note head. Using the Adjust button cycles in the opposite direction. The style is applied to the note nearest the cursor only.

Click on the Enharmonic icon to alter a note with an accidental to its enharmonic equivalent; that is, a C sharp is turned into a D flat, and vice versa.

Click on the Reverse tie icon to reverse the direction in which the tie of a tied note bends. Normally, the tie bends in the opposite direction to the tail of the note. In two-part music, however, the ties bend in the same direction. Rhapsody cannot always tell whether two-part music is or is not intended, so this feature is useful to correct Rhapsody's mistakes. Also, large chords look unsightly if all the ties bend the same way so the bottom note of an up stem note cluster often has its tie reversed, as does the top note of a down stem cluster. eg:

Moving notes and Kerning

This pair of icons move the single note nearest the cursor up or down. Using the Adjust button reverses the effect.

This pair moves the whole cluster nearest the cursor up and down. Again using the Adjust button reverses the effect.
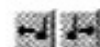
This pair moves a note or cluster one slot to the left or right. Moving a note left or right may cause the timing of a bar to become incorrect; use it with caution.

Finally, there are some miscellaneous icons which affect the arrangement of notes in a bar.
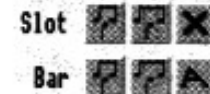
'*Kerning*' is the process in printing whereby certain letters of the alphabet are moved closer together than normal to improve their appearance. The same effect is needed in a musical score. It is most obvious when the part playing triplets is set against a second stave playing duplets. This is what Rhapsody does with a bar of Debussy:

Click on Kern bar and Rhapsody will compress the bar, making use of blank slots on each stave to give the best appearance it can, thus:

Click on Unkern bar to restore the bar to its default state. Both kerning and unkerning cause Rhapsody to forget about any adjustments you may have made to the slot widths yourself by dragging (see page 44), so you should perform kerning before you fine tune.

Click on Kern slot to have Rhapsody calculate the ideal width for a single slot.

9. Other objects

There are several further kerning options:

Click on **Unkern slot** to have Rhapsody return the slot to its normal width, which is always wide enough for whatever objects it may contain.

Click on **Delete slot** to delete a slot and its contents.

Realign bar

In a correctly written score, every bar of every stave should have the correct number of notes and rests in it and all the notes which are sounded simultaneously should be vertically aligned. In practice, it is possible to have too many notes, too few notes or badly aligned notes in a bar. Rhapsody can detect these inconsistencies and can, if you wish, give you a warning. In addition, provided every stave has the correct number of notes in it, Rhapsody can realign a bar for you. This is not a trivial task however (it is not always possible to guess what the composer had in mind) and Rhapsody may give up before the bar is fully aligned. Click **Realign bar** to have Rhapsody attempt it.

10. Capturing music

If you have a MIDI keyboard, you can enter notes onto a score by playing them on the keyboard. There are three ways of doing this: **Step-time capture, Semi real-time capture** and **Real-time capture**. In some respects these increase in order of difficulty so we will treat them is this order.

Step-time capture

This mode is entered from the main menu by choosing **Capture ▶ Step-time ▶ Auto tails/Up tails/Down tails**. Alternatively you can use the keyboard shortcuts Ctrl' Ctrl[or Ctrl]. The cursor turns orange and a red note (or a pair of notes) appears to remind you which mode you are in.

Now, whenever you play a note (or chord) on the keyboard, a note (or chord) of that pitch will be entered into the score in the appropriate place under or after the cursor. New slots will be created if necessary and new barlines inserted automatically. When in auto tails mode, the direction of the tail will be determined by the height of the note on the stave; otherwise it will be as you have chosen.

While the basic length of the note is determined by the note selected in the symbols window, supplementary symbols such as dots and triplets (but not accents or of course, accidentals) can be added to this basic note length. Naturally enough, if anything other than a note is selected, no note is entered.

In order to enter rests, either select a rest symbol and press any note on the keyboard, or press the note on the keyboard which has been designated the 'rest note'. Pressing this note will enter a rest of the same note-length as the other notes. By default it is set to C2# (the lowest C# on a conventional 5-octave keyboard) but you can change this value using the *Preferences* window. See page 138 for more details.

Step-time capture is excellent for entering rhythmically simple parts. It is easy enough to change the note selected using the function keys F1 to F8 but this can become tiresome if the part is rhythmically very complex and it is all too easy to get one beat out of step with the music. If you make a mistake, pressing the Delete button or the / key will delete the note under the cursor and you can carry on where you left off. Normal editing can be carried out while in step time mode but remember that if you move the cursor, Rhapsody will forget where it is in the bar and it may not put the next note quite where you intended. To enter a chord, you can either play the whole chord at one go or you can build up the chord note by note. The chord is only entered into the score when the notes are released.

To exit step-time capture mode either choose Stop capture from the main menu or use one of the keyboard shortcuts, Ctrl' Ctrl[or Ctrl], which actually toggle step capture mode off.

Semi real-time capture

The only way to enter this mode is via the main menu; select Capture ♦ Semi real-time ♦ Auto tails/Up tails/Down tails. This time a beat is sounded at the tempo of the score you have selected. If the beat is too fast for you, you can change the tempo of the beat by altering the speed setting in the Play options window, see page 36 When you play a note (or chord) on the keyboard and release it, a note (or chord) is entered into the score, The length of the note transcribed is equal to the length of the note you played. In other words, if you play a sequence of notes of different lengths Rhapsody will effectively transcribe what you have played immediately. The different between Semi real-time and Real-time capture is that in Semi real-time capture, you can stop playing whenever you like and start again without stopping the beat and starting again. Indeed, you can play each note one-finger style, pausing between every note if you want.

Not only does Rhapsody pick up the length of the note, it also picks up the *start* of the note in relation to the beat so if you play syncopated crotchets, Rhapsody will transcribe syncopated crotchets. More usefully, if you play a note *on* the beat, Rhapsody will transcribe a note *on* the beat and will put in a short rest for you as well if it is necessary. In effect, Rhapsody transcribes what you play except that it throws away all rests equal to or longer than a crotchet. Of course, you may want to insert such rests. This is done using the special note on the keyboard which has been designated to play rests. By default it is set to C2# (the lowest C# on a conventional 5 octave keyboard) but you can change this value using the *Preferences* window. See page 138 for more details.

As with all forms of real-time transcription, some degree of quantisation has to be applied. That is to say, the notes have to be 'pulled in' to the nearest quaver or semiquaver. If the beat is faster then 88 crotchets per minute, quaver quantisation is applied. Anything less and Rhapsody will transcribe semiquavers as well.

If you play an incorrect note, you can use the normal editing facilities to correct your mistake before carrying on.

Semi real-time capture is very useful for transcribing simple melodies because you can stop and start again whenever you get to an awkward bit. On the other hand, you cannot transcribe triplets and because the beat is a crotchet in length, it is not much use in compound time.

Real-time capture

Real-time capture is a two stage process. First you press a Record button and play the notes you want to capture while Rhapsody plays the rest of the score (or a beat); then you press a Transcribe button to enter the notes you have played into the score. Unlike the previous two capture options this method does not put notes onto the score immediately - so there is no visual confirmation other than the Recording window discussed below.

Rhapsody has some of the most sophisticated real-time capture routines available on any computer at this time and provided you are a reasonably competent keyboard player and can actually play the notes you want to transcribe, Rhapsody will transcribe them for you, even in four parts on two staves if needed. There are, however, several problems to be faced which seriously limit any computer's ability to transcribe music directly from a keyboard and it must be realised that Rhapsody has to make a large number of arbitrary decisions when transcribing music. It has to decide which direction the tails go, for example, and what accidentals to use and whether a note is full value or tied etc. etc.. More importantly, no-one can play music perfectly and some degree of quantisation has to be applied - that is to say, the notes played must be rounded off to the nearest quaver, semi-quaver or whatever. In order to make things as easy for the user as possible, all these decisions and parameters are handled completely automatically by Rhapsody. The only choices you have to make are:

- the degree of *flexitime* applied when capturing notes and
- whether to transcribe in one or more parts on one or more staves.

Both these options will be described in due course.

Before you start recording, position the cursor at the point in the score at which you wish to start capturing. Then to enter real-time capture mode, you can:

- choose Capture ♦ Real-time from the main menu

- press Ctrl-O

- click on the Record button in the main panel ⬤

To leave real-time capture, ready to transcribe the recorded data, you can:

- bring up the main menu - this stops real-time capture immediately
- press Ctrl-O again
- click on the Record button again

As soon as you enter real-time capture the score starts to play from the cursor position. If you have the Beat option set, in Play options, a beat is played as well.

In addition the Recording window appears:

Usually you will ignore this window as you will be concentrating on playing the notes that you want to enter into your score as accurately as you can but the window is useful in two ways. Firstly, the icons at the bottom provide confirmation that Rhapsody is receiving notes from your MIDI keyboard properly. Secondly, it allows you to set the degree of 'flexitime' required.

Flexitime

Flexitime is a system where you and Rhapsody cooperate in defining the beat. If flexitime is set to maximum, then instead of playing the music (or the beat) in strict tempo, Rhapsody will try to follow you - so if you speed up. Rhapsody will speed up and if you slow down, Rhapsody will slow down too. This sounds wonderful but of course it has serious limitations. It does mean that it is impossible to transcribe triplets (for example) because Rhapsody will think that you are simply speeding up.

With flexitime set to off, Rhapsody plays, and expects you to play, in strict tempo. Intermediate values of flexitime alter the amount of leeway Rhapsody gives you. Which setting you eventually prefer will be determined by your skill as a keyboard player and the complexity of the music you wish to transcribe. Whenever you change the setting, Rhapsody remembers it and will use it again automatically.

Transcribing music

When you have finished playing, stop recording either by clicking on the Record button or bringing up the Main menu.

Assuming that you wish to transcribe what you have played, either choose Transcribe... from the Main menu or click on the Transcribe button.

This brings up the following window:

which has six 'Action' buttons and a 'Cancel' button.

transcribes the notes onto a single stave, using up and down tails as appropriate.

transcribes notes onto a single stave using two separate parts when appropriate. Unlike the first button which only transcribes a single part, this option allows you to capture notes of different lengths simultaneously.

transcribes the notes onto a single stave, using down tails only. Always use this option or the next when adding a second part to a stave which already has one part on it already.

transcribes the notes onto a single stave, using up tails only. Always use this option or the previous one when adding a second part to a stave which already has one part on it already.

transcribes the notes in two parts on two staves. Rhapsody expects there to be a stave below the cursor and will generally put notes above middle C on the upper stave and notes below middle C on the lower stave. It makes sense therefore to provide one treble and one bass clef but this is not necessary nor is it assumed by Rhapsody which will still transcribe the notes correctly even if a different clef is used.

transcribes the notes in four parts on two staves. This option is generally only successful when transcribing hymn tunes etc. which are written in strict four part block harmony.

Correcting errors in transcribing

Whenever you transcribe notes into a score, Rhapsody automatically saves the original score onto the clipboard and the clipboard icon appears with a red border to indicate that it contains relevant data.

If you find that you have made a mistake, e.g. if you have clicked on the wrong 'Action' icon, or if the transcription went disastrously wrong, you can simply restore the original score with a click on this icon.

If it was just a case of clicking on the wrong icon, your recorded data is still intact and you can transcribe it a second time by choosing Transcribe... and selecting a different transcription method.

Quantisation

If you are a Rhapsody 3 user or are used to other music programs, you may be wondering what happened to all that business about quantisation levels, transcribing triplets etc. Please don't. Let Rhapsody do the worrying for you. Quantisation is calculated automatically taking into account not only the note being transcribed but also the notes round about and the tempo at which the notes were played. If you find that Rhapsody won't let you transcribe semiquavers, for example, try using a lower flexitime setting or record at a slightly slower tempo.

Legato

Rhapsody will not normally transcribe short rests between long notes if the rest if less than half the length of the surrounding notes, but if you are a one-fingered pianist and you wish to transcribe a series of approximate quavers as legato crotchets, press the pedal (ie footswitch) on your MIDI keyboard. (A footswitch is a useful and inexpensive accessory for your keyboard if you do not already possess one).When the pedal switch is pressed. Rhapsody will not transcribe rests between notes.

Be sure to press the pedal *after* you start recording so that Rhapsody knows that the pedal is down.

11. Scores, staves and blocks

Working with staves and scores

Rhapsody 4 allows you to create scores with any number of staves. (There is a technical limit of 50 staves but even Tallis' famous motet 'Spem in Alium' only requires 40.) Each stave can have its own name, style, MIDI port, channel, and voice, as well as various other options.

Rhapsody has several features which alter a whole score, a whole stave or a marked block. To access these features, click Menu over the stave to bring up the main menu:

```
       Rhapsody
  Score "Blank1"    ▷
  Stave ""          ▷
  System            ▷
  Block             ▷
  Format            ▷
  View              ▷
  ------------------
  Go to             ▷
  Play from         ▷
  Play options...
  ------------------
  Capture           ▷
  Transcribe...
```
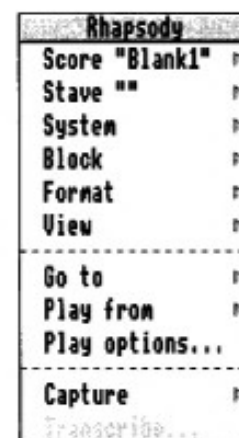
In general the Score ▶ menu will show the name of the score (Score "Blank1" ▶ in the illustration above) and if you have given the stave a name, the Stave ▶ menu item will tell you the name of the stave you clicked on, for example, Stave "Piccolo" ▶; otherwise it will show that the stave does not have a name. In this chapter, for convenience, we will refer to these menu items as just Score ▶ and Stave ▶.

Adding a stave

To create a new stave, bring up the main menu by clicking the Menu button on the score at the position where you wish the new stave to appear. Choose Stave ▶ Add stave ▶; which leads to the following menu.

```
      Stave
   Treble
   Bass
   Piano
   Strings
   Percussion
   Blank
```
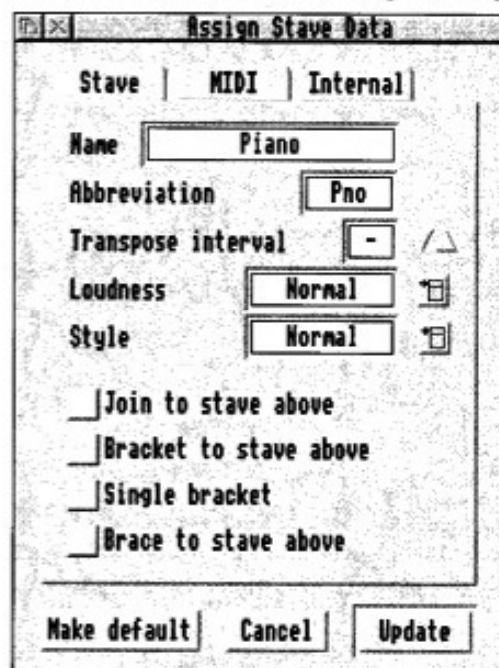
from which you may choose a suitable stave or group of staves. (It is possible to modify or add to this list of staves. See *!Rhapsody4.Resources.Staves* for more information).

To add a default stave, simply click on Stave ▶ Add stave without going to the next menu. Normally this stave is given a treble clef but if it is at the bottom of the score it will be given a bass clef.

Altering a stave

To change any of the attributes of a stave, either directly after it has been added, or at any point during editing or playing, click Menu on the stave you wish to change, and choose Stave ▶ Alter stave.... This action brings up the Assign Stave Data window:

```
▣ ⊠           Assign Stave Data

      Stave  |  MIDI  | Internal

   Name   [        Piano        ]

   Abbreviation        [  Pno  ]

   Transpose interval    [ - ]   △

   Loudness     [ Normal  ]  🗗

   Style        [ Normal  ]  🗗

   _|Join to stave above
   _|Bracket to stave above
   _|Single bracket
   _|Brace to stave above

   Make default|  Cancel  |  Update
```

The three tabs at the top determine which set of options is shown in the window. They are there to make the window smaller and easier to use; all the options will be saved together, regardless of which tab was last selected.

● Click on Stave to alter options regarding the stave's appearance, as well as general playing options, and the stave name.

● Click on MIDI to alter the information Rhapsody sends to the MIDI instrument about the stave, including the channel and voice, and pitch maps (see below)

● Click on Internal to alter the internal voice, polyphony, and stereo position used for that stave.

When the Stave tab is selected, the Assign Stave Data window looks as above.

● Enter a name (up to 20 characters) into the Name writable icon to change the name of the stave. This name is printed before the stave at the beginning of the score. For example, *Violoncello II*.

● Enter a short name (up to 6 characters) into the Abbreviation writable icon to change the abbreviated name. This is printed before the stave on every system. For example, *Vc. II*.

● Enter a value into the Transpose interval writable icon, or use the bump arrows, to alter the number of semitones Rhapsody transposes the stave whilst playing. This has no effect on the printed score, and is provided so you can easily write music for transposing instruments (A clarinet, E flat saxophone, etc.) A positive value transposes up that number of semitones; a negative value, down. This value is automatically altered when you Transpose a stave (see page 113); you may find it easiest to write your music at concert pitch and transpose it for the relevant instruments later using this facility. Likewise, it is customary to write a double bass part an octave higher than it is actually played at. This instrument would require a setting of -12, because there are 12 semitones in an octave.

● Choose an option from the Loudness menu icon to alter the loudness at which the stave is played: Silent causes the stave not to be played at all, Quiet causes it to be played at half volume, Normal causes it to be played normally and SOLO causes all *other* staves (with the exception of those also marked as SOLO) to become silent. This is intended only to help during the composition of a score; to alter the volume in a score you should use the *Volume change* or *Dynamic* objects. Staves set to SOLO are drawn in red in the score window; staves set to Silent or Quiet are shown in shades of grey.

● Choose an option from the Style menu icon to change the appearance of the stave: Normal, where the stave is printed normally, Reduced, where the stave is printed smaller (used for *ossia* and rehearsal parts), Percussion, where the stave is given only one line (although all the pitches are still available), Sol-fa, which is blank apart from bar-lines, and Blank which has no stave or bar lines at all. Guitar chords are designed to be placed onto a Blank stave set to play using some suitable guitar sound.

The remaining four options determine how the stave is joined to the next stave above, if there is one:

● Select Join to stave above to have the barlines of the stave join up with those of the stave above. Piano and organ parts are always joined together in this way. Sometimes sub-sections of an orchestra are similarly joined eg a pair of clarinet parts.

● Select Bracket to stave above to place a bracket between the current stave and the stave above at the beginning of the score, and at the start of each system. In a small score, all the parts are normally bracketed together. In a large orchestral score, it is usual to bracket the major sections eg chorus, strings, wind etc. together.

● Select Single bracket to place a bracket on that stave only at the beginning of the score, and the start of each system. This is used in a large score when one section of the orchestra only needs one stave eg perhaps the percussion section.

● Select Brace to stave above to place a brace (curly bracket) between the current stave and the stave above at the beginning of the score, and at the start of each system. Piano staves are normally braced together. If you give a stave both a bracket and a brace, the brace will be printed as a thin bracket. This can be useful to brace together say the two horn staves in a large brass section which is already bracketed together.

Any combination of these options can be selected, although selecting Brace to stave above also selects Join to stave above automatically (keyboard parts are almost always joined at the barlines as well as braced). Brackets and braces can be extended over several staves by selecting the Bracket or Brace to stave above options for each of those staves, except the topmost.

When the MIDI tab is selected, the window changes:
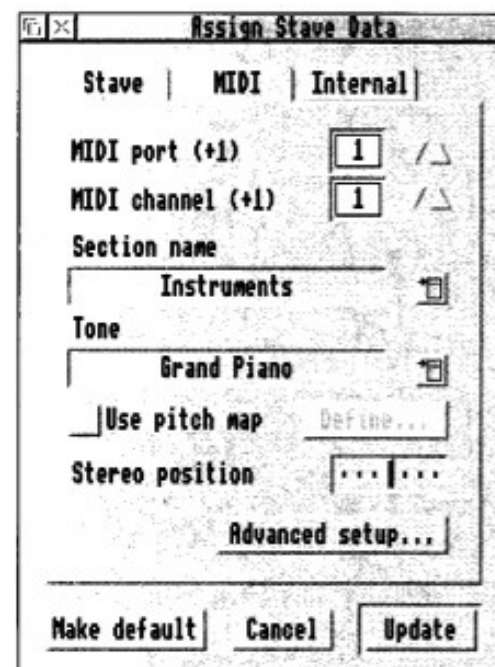
MIDI instruments do not all agree on how ports, channels and voices are numbered. Although the actual signals are numbered from zero, most (but not all) instruments add one to some (but not always all) of the values so as to appear more user-friendly. Rhapsody *always* numbers its MIDI ports, channels and voices from 1. If your MIDI instrument numbers any of these things from zero (you can check in the manual, or by seeing which of 0 and 4, 16, or 128 are possible), you will need to add one to the value. *(The (+1) is just there to remind you)*.

● Enter a value into the MIDI port writable icon, or use the bump arrows, to alter the MIDI port on which the stave is output. Values from 1 to 4 are acceptable; most setups will only have instruments on port 1.

● Enter a value into the MIDI channel writable icon, or use the bump arrows, to alter the MIDI channel onto which the stave is output. Values from 1 to 16 are acceptable. In General MIDI, channel 10 is used for percussion, although Rhapsody treats it just like a normal channel - if it does not work to begin with, you will need to check the setup of your instrument, and possibly also the Tones file inside !Rhapsody (see page 144 for more details.)

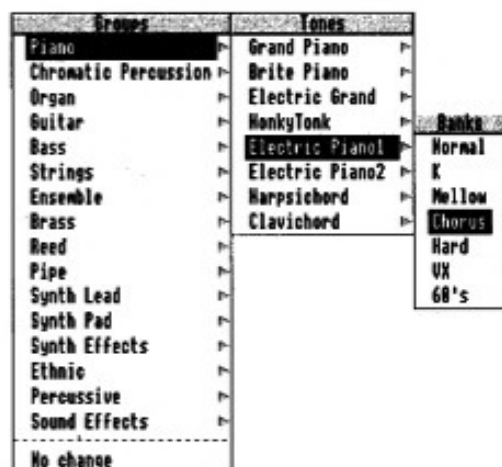● Click on the Menu icon beside the Section name. This will bring up a list showing the major groups of instruments (or 'sections') which your MIDI instrument is capable of. Here for example is the section menu appropriate to the Yamaha XG50 sound card.

> **Sections**
> Instruments
> Drum kit
> Sound effects
> Pitched Sound FX

Make an appropriate selection from this menu.

● Now click on the second menu icon beside the Tone name. In general, in each Section there will be up to 128 different basic Tones (or voices) each of which may have one or more subdivisions called Banks. For convenience, the 128 basic tones are divided into a number of Groups. Again, all of this information (which is different for every MIDI instrument) is contained within the **MidiSetup** files.

Choose a Group, a Tone and if required a Bank: eg.

Groups	Tones	Banks
Piano	Grand Piano	
Chromatic Percussion	Brite Piano	
Organ	Electric Grand	
Guitar	HonkyTonk	Normal
Bass	Electric Piano1	K
Strings	Electric Piano2	Mellow
Ensemble	Harpsichord	Chorus
Brass	Clavichord	Hard
Reed		UX
Pipe		60's
Synth Lead		
Synth Pad		
Synth Effects		
Ethnic		
Percussive		
Sound Effects		
No change		

Alternatively, you can choose No change. If you select this option, Rhapsody will not send a program change message at the start of the piece and your MIDI instrument will play whatever voice you have set it to play beforehand.

The contents of these menus are determined by the files present in the MidiSetup directory inside Rhapsody. Some MIDI instruments, particularly older ones, do not use *Sections* at all; accordingly, the icons may be greyed out according to which MIDI instrument is assigned to the current port and channel. All of this information can be altered to match your own particular setup: see the chapter on *Customising Rhapsody*, page 137.

● It may be that you have not had time to set up the MidiSetup files to match your instrument or perhaps you are more familiar with the actual codes which are used to change the tones on a MIDI instrument. If this is the case, you may like to set up the tone used in a different way. Click on the Advanced setup icon to bring up the following window:

> **Midisetup**
>
> Program change no. (+1) [1] △
>
> Bank select MSB (+1) [1] △
>
> Bank select LSB (+1) [1] △
>
> [OK]
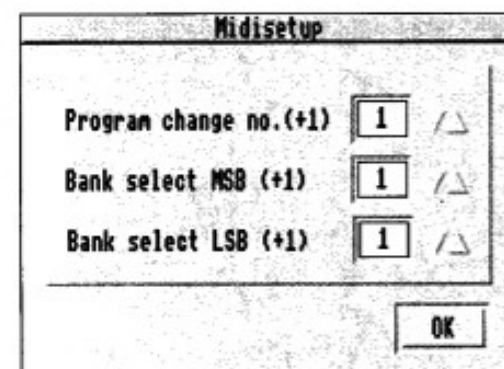
Early MIDI instruments were restricted to 128 tones or voices. This number is called the Program change number and is still used to select the basic tone. Recently, more and more instruments have been using two more numbers called Bank select numbers. One is called MSB (for Most Significant Byte) and the other is called LSB (for Least Significant Byte). Unfortunately, different manufacturers (and even different instruments from the same manufacturer) have used these numbers in different ways but there seems to be a consensus emerging that the MSB number will select a major grouping eg a set of Instruments or a set of Drum kits or a set of Sound Effects etc. (ie a Section in Rhapsody terms) while the LSB is used to modify a tone in some subtle way eg by adding a chorus effect or detuning etc. None of this matters really if all you want to do is enter some numbers from your MIDI manual except that you must remember that Rhapsody counts *all* MIDI numbers from 1 and not from 0. This will often mean that you have to add 1 to the numbers printed in your MIDI manual. To check whether this is necessary or not, see if the manual uses the numbers 0 or 128. If it uses 0, then add 1. If it uses 128, don't add 1.

To set the tone, then, either write the appropriate numbers in the writable icons or use the bump arrows to set the values required.

- If you have chosen a drum kit or a sound effects tone, each pitch of the scale will produce a different sound. Often the notes required to play the drum sounds you want will either be very low or very high. To improve the appearance of the score, you can redefine the 12 lines and spaces on the normal stave to produce any pitch (and hence any sound) that you want. Select the Use pitch map icon in the Assign Stave Data window and click on Define... to open the following window:

Pitch Map for stave ''			
Ride Cymbal 1 (Eb3)		Hi-Hat Open (Bb2)	
Crash Cymbal 1 (C#3)		Hi-Hat Pedal (G#2)	
High Tom (D3)		Hi-Hat Closed (F#2)	
Mid Tom H (C3)		Snare H (E2)	
Mid Tom L (B2)		Snare M (D2)	
Low Tom (A2)		Bass Drum H (C2)	
Floor Tom H (G2)			

Cancel   Update
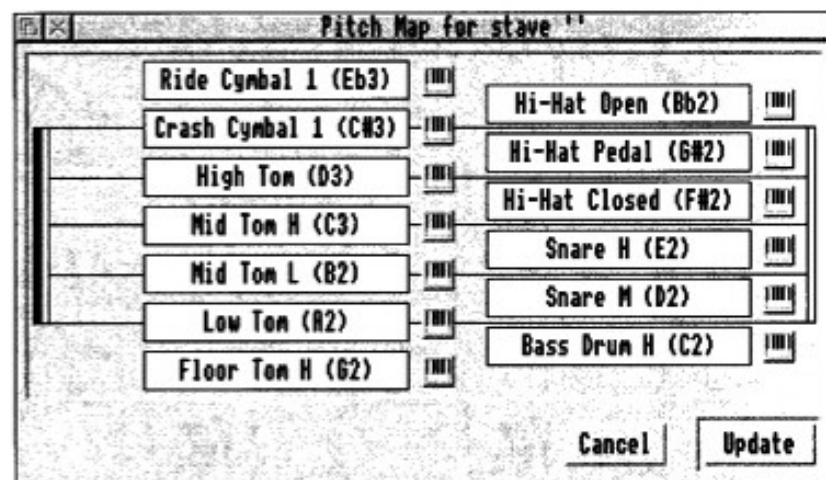
The window contains a representation of the stave together with the names of the sounds the stave currently maps to, if Rhapsody knows them. To change the pitch used by each line or space, you can do one of three things. Either

O enter at least four characters of the name of the sound you want into any of the writable icons. Rhapsody will search for the best match in the current list of pitch names and if it finds a match, will display the name with the note name in brackets after it. If it does not find a match it will say so and leave the definition unchanged. You can change the lists of pitch names, which are stored in the Keymaps file within the MidiSetup structure (see page 144 for more details).

O enter the name of the note required (in the format, D4, G#7, Ab0, etc. Use capital letters for the notes, and the hash and the letter 'b' to represent sharps and flats. Middle C is C4 and the valid range is C0 - B8)

O click on the small keyboard icon, in which case a small window appears showing that Rhapsody is waiting for you to play a note on the MIDI instrument.

MIDI input	
E4	Conga L
Octave shift	0
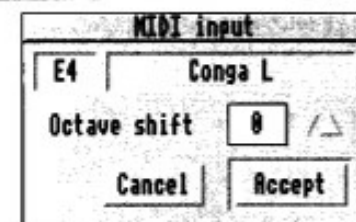
Cancel   Accept

Play notes until you find the sound you want, then click Accept; or click Cancel to return to the pitch map window with the original sound. If your keyboard does not extend to the full range of notes, use the bump arrows to apply a shift of one or more octaves. For example, with the octave shift set to 1, middle C played on the keyboard will be treated as if it was a C an octave higher.

Once you have selected all the sounds that you want, click on Accept to implement the changes or Cancel to close the pitch map window without making any changes.

Note that, while the pitch map is designed for use with unpitched sets of sounds like a drum kit or sound effects voice, the map will be applied to whatever voice is used. If, for example, you play a scale of C major with a piano voice when a pitch map is being used, some very bizarre effects will be produced. Note also that, while the pitch map is placed for convenience with the MIDI set up window, it will apply equally to the sounds produced by the internal voices as well.

- To set the stereo position of the MIDI voice, move the little red slider. There are seven positions available - one in the centre, and three on each side.

When the Internal tab is selected, the window looks like this:

```
┌─────────────────────────────────────┐
│ □☒       Assign Stave Data           │
│                                       │
│    Stave │  MIDI  │ Internal│         │
│   ┌─────────────────────────────┐    │
│    Part  /△                      │    │
│                                       │
│    Voice number          [ 2 ] /△    │
│   ┌─────────────────────────────┐    │
│   │     StringLib-Soft       ᴸ│ │    │
│   └─────────────────────────────┘    │
│    Stereo position       │···│···│   │
│                                       │
│                                       │
│    Polyphony             [ 2 ] /△    │
│                                       │
│                                       │
│                                       │
│                                       │
│                                       │
│                                       │
│   ┌───────────┬────────┬─────────┐   │
│   │Make default│ Cancel │ Update  │   │
│   └───────────┴────────┴─────────┘   │
└─────────────────────────────────────┘
```
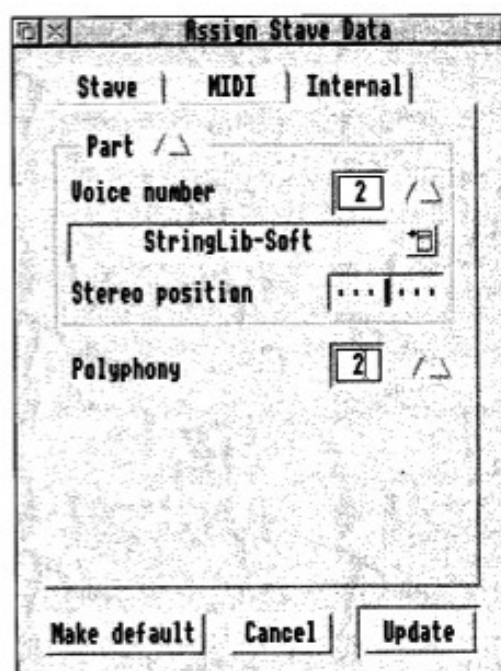
● Enter a value into the Voice number writable icon, or use the bump arrows, to change the number of the internal voice used for that stave. Alternatively,

● select a voice name from the menu icon beneath this to change the internal voice name interactively.

● Click on or drag the slider beside Stereo position to alter the left-right position of that stave across the internal stereo spectrum.

● Enter a value into the Polyphony writable icon, or use the bump arrows, to change the number of internal voices allocated to that stave. The overall loudness of the computer is spread over the 8 internal voices and the more voices that are used the quieter each one becomes.

The number of internal voices which can be played at the same time is limited to 8. If you have more than 8 staves, or if some of the staves have chords in them, you can soon run out of voices. Rhapsody attempts to overcome this problem by grouping together staves which have exactly the same voice and stereo settings into a single 'part'. Then Rhapsody allocates the 8 available voice channels to each

'part' using the 'polyphony' values as a guide to how many channels to allocate to each part. Rhapsody will always allocate at least 1 channel to each part and will distribute the remaining channels to those parts which require more polyphony. In this way, Rhapsody does the best it can with the limited resources available. There is no requirement that the total polyphony of a score should add up to 8. You need only set this value if you particularly want one part (eg a piano part) to have more voices allocated to it. When the score is played, channels are used in rotation. What this means is that however many staves you have, all the notes will be played. The only problem is that some notes may be cut short when that channel is required by later notes.

While it is possible to play a score containing more than 8 staves using the internal voices, it is still not possible to allocate more than 8 'parts'. If you attempt to do this, Rhapsody will warn you that the score cannot be played properly. When allocating voices to a stave, it is sometimes convenient to search for a part which already exists. This can be done using the bump arrows next to the Part label at the top of the window.

Remember too that if you play a metronome beat, one of the channels will be stolen for this purpose.

Once you have set all the choices for the stave to your satisfaction, click on Update. If you decide you do not want to keep the changes, click on Cancel instead. You can also save a set of options to be used for all subsequent new staves by clicking on Make default.

Deleting a stave

To delete a stave, click Menu over the stave you wish to delete, and choose Stave ♦ Delete. You will be asked to confirm the deletion. The stave is removed completely, and the two staves on either side moved to fill up the gap.

You cannot delete a stave if it is the only stave left in the score; to remove all data from the score in this case, you can use Score ♦ Discard or Stave ♦ Clear.

The remaining operations which can be carried out on a stave are re-tail, transpose, copy and clear. These operations can also be carried out on a marked block and will be described later.

Marking a block

You can select a block of music to be re-tailed, transposed, copied, cleared, etc. This block consists of a section of the score across one stave or a group of adjacent staves, and appears as a rectangular, shaded area in the linear format. In other

formats the block may appear to be split into several parts, but these parts are always next to each other in the score. If you mark a block in one score, the block will automatically appear in all currently open views of the same score. There is only one block marker so marking a block in one score automatically removes it from another score.

To mark a block, double-click with Select in one corner of the block, and hold Select down. Then, with Select still depressed, drag the rectangular box that appears until the pointer is over the slot in the opposite corner of the block. Now release Select. The block appears between the two points. Note that the rectangular 'drag box' which appears during this operation is only an approximation to the shape of the final block. In particular, the drag box will not be correct if you select a block in a formatted score which is split over several systems, although the block itself will work perfectly.

You can mark a single slot as a block by double-clicking on it holding down the Select button until the block pointer appears. Alternatively press Shift-Z.

To extend a block, either double-click with Adjust or again press Shift-Z.

A whole stave can be marked as a block by pressing Ctrl-Shift-Z.

The only way to remove a block from a score is by pressing Ctrl-Z or by inserting a block in a different score.

Transposing

- To transpose a marked block, click Menu over the score containing the block, and follow Block ♦ Transpose ♦.
- To transpose a stave, click Menu over the stave, and follow Stave ♦ Transpose ♦.
- To transpose a score, click Menu over the score, and follow Score ♦ Transpose ♦.

In each case a similar window appears:

```
          Transpose
  ⦿ Up  ◯ Down

  Semitones  [ 2 ]  △

                [ OK ]
```
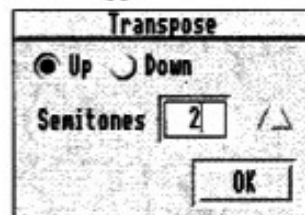
Enter a value into the writable icon, or use the bump arrows, to change the number of semitones by which the area or score is transposed. Click on the Up or Down

radio icons to change whether transposing is performed upwards or downwards.

You should note these differences between transposing a score or stave, and transposing a block:

Transposing a stave

When a stave is transposed, all key signatures in the stave are altered so that accidentals are only necessary when there is already one in the score. These accidentals are altered. Rhapsody also alters the *Transpose interval* of that stave, so that the stave sounds the *same* as it did before transposition. (To have the stave sound higher or lower, you will need to use Stave ♦ Alter stave... to put the transpose interval back where it was.)

This feature is useful when you are dealing with transposing instruments like a B flat trumpet or E flat saxophone: you can write the music at concert pitch, then Stave ♦ Transpose it by the relevant number of semitones. The music will play as before, but the part will be shown as it should be printed. Note that it is becoming usual to show all parts on a full score at concert pitch; you should transpose those staves that require transposing before printing out separate parts.

Transposing a score

Transposing a score acts the same as transposing all the staves separately.

Transposing a block

When a block is transposed, Rhapsody cannot change key signatures or the stave's transpose interval, as that would affect music outside the block. Therefore, it needs to add accidentals. Rhapsody tries to make the accidentals it adds, consistent with the existing key signature, but it will never create double-sharps or double-flats, so you may need to check through the block to find where these would be better than their naturalised equivalents.

Hint: to change notes with accidentals to their enharmonic counterparts, you can use the Enharmonic icon in the Object Adjustments group; see page 92 for more details.

After it has been transposed, the block will sound higher or lower than the original by the relevant number of semitones.

Transpose intervals

For your reference, here are a few commonly-used transpose intervals.

Octave	12 semitones
Major fifth	7 semitones
Major fourth	5 semitones
Major third	4 semitones
Minor third	3 semitones
Concert pitch to Bb instrument	2 semitones **up**
Concert pitch to A instrument	3 semitones **up**
Concert pitch to F instrument	5 semitones **down**
Concert pitch to Eb instrument	3 semitones **down**
Bb instrument to concert pitch	2 semitones **down**
A instrument to concert pitch	3 semitones **down**
F instrument to concert pitch	5 semitones **up**
Eb instrument to concert pitch	3 semitones **up**

Copying

There are several different ways of copying. A *score* can be **duplicated** - that is to say copied in its entirety creating a new score window in the process. All print and play options as well as formatting information are duplicated as well.

A *stave* can be **copied**. This process takes a stave from one score and **merges** the contents of that stave into a second score or onto a second stave in the same score, preserving as far as it can the musical relationships between notes, symbols and lyrics etc. This is not a trivial task; some objects like phrase marks and hairpins are unlikely to look right in their new positions and clearly it makes little sense (for example) to copy a stave from a score in 3/4 time into a score which is is 4/4 time.

A *block* can copied in two ways. It can either be **merged** with the notes that are already there (like a stave) or it can be **inserted** into a score at a particular place. These options are described below.

- To duplicate a score, click Menu over the score you want to duplicate and choose Score ▶ Duplicate. A new window will appear with the new score whose name will be the same as that of the old score with the last letter incremented by one.

- To copy a stave, place the cursor at the position you want to copy to, click Menu *over the stave you want to copy*, and choose Stave ▶ Copy ▶. Be very careful to click the menu button on the right stave. If you decide that you didn't want to copy the stave after all, the original score will have been saved on the clipboard and you can restore it by clicking on the Clipboard icon in the Main panel window.

When copying a stave, Rhapsody copies everything *on that stave*. This includes clefs but *not time signatures* (which belong to the score, not the stave). If there are time signature changes, Rhapsody expects them to exist already in the score. This

will automatically be the case if you are copying one stave to another position in the same score. Clefs, on the other hand, can often be copied unnecessarily. This is usually harmless but the extra clefs should be deleted in the normal way.

Instead of copying everything on the stave, it is possible to copy selected features by choosing from the Copy submenu.

```
        Copy
Everything
Up tails
Down tails
Notes & rests
Text
```
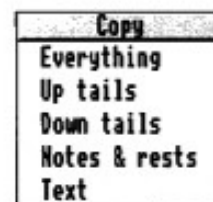
- Choose Everything to copy all the information across.
- Choose Notes & rests to copy only notes and rests, leaving any text, key signatures, etc., behind. Symbols that are attributes of notes are also copied: accidentals, ties, accents, trills, but *not* bowing marks (they are attributes of slots).
- Choose Up tails to copy only up-tailed notes and associated rests.
- Choose Down tails to copy only down-tailed notes and associated rests.
- Choose Text to copy only the text. For lyrics, this will only work satisfactorily if the destination contains notes in the same rhythm as the source.

In each case, clicking on the Copy ▶ option itself has the same effect as Copy ▶ Everything.

- To copy a marked block, mark the block you want to copy, place the cursor at the position you want to copy to, click Menu on any score window and choose Block ▶ Copy ▶, or press Ctrl C.

As with copying a stave, the block copy routine copies everything in the block regardless, including clefs *but not time signatures*. The same comments therefore apply to the copying of blocks as the copying of staves. In general, it is not a good idea to copy blocks with lots of time signature changes unless you can be sure that the temporal structure of the bars where you are copying to, is exactly the same. Likewise with clefs. If you copy a block of notes written in the treble clef onto a stave in the bass clef, the notes will appear in the same position on the stave and will therefore sound completely different.

- To insert a copy of the block between two slots in a score, click Menu on the score containing the block, place the cursor in the slot you want the copy to follow, and choose Block ▶ Insert copy ▶, or press Ctrl V.

Copying is always performed so that the top left corner of the area to be copied is placed at the cursor. If there are not enough staves below the cursor to hold the block, Rhapsody will not be able to copy it; you should create new staves in the destination score as required. If the copied block overshoots the end of the score (for example, if you have deliberately copied the block to the end of the score), new bars are created to hold the block.

Rhapsody will not allow you to copy a block or stave into part of itself.

If the destination area of the score already contains notes, you should make sure that these notes are compatible with the ones that you will be adding to them. Because you can only have one length of note with the same tail in the same slot, Rhapsody may have to change the length of some of your notes, and the resulting score may not play correctly. You can avoid this problem by making sure that the block you are going to copy contains only notes of the opposite tail to those found in the score. (You could make use of Block ▶ Re-tail ▶ and Copy ▶ Up/Down tails to do this.)

To insert a series of bars between one bar and another in a score, you should place the cursor on the relevant barline, and ensure that the block begins *just after* a barline and ends *with* a barline. This way, the original barline will be kept before the block, and the block itself will place a barline at the end. Otherwise, you may end up with bars of double length or two consecutive barlines, as the Insert routine does not keep track of bar lengths.

All the copy routines save the original score on the clipboard automatically.

Clearing

- To clear a score, click Menu over the score, and follow Score ▶ Clear ▶
- To clear a stave, click Menu over the stave, and follow Stave ▶ Clear ▶
- To clear a marked block, click Menu on the score containing the block, and follow Block ▶ Clear ▶

Following the arrow beside Clear ▶ leads to the same submenu as Copy:

```
       Copy
Everything
Up tails
Down tails
Notes & rests
Text
```
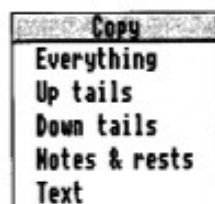
- Choose Everything to remove all objects. If the block contains all the staves, or if you are clearing an entire score, then this includes objects that span all the staves (barlines, time signatures, etc). Otherwise, these objects are left in.

- Choose Notes & rests to remove only notes and rests, leaving any text, key signatures, etc., behind.
- Choose Up tails to remove only up-tailed notes and associated rests.
- Choose Down tails to remove only down-tailed notes and associated rests.
- Choose Text to remove only the text.

In each case, clicking on the Clear ▶ option itself has the same effect as Clear ▶ Everything.

Other operations

There are some useful, but less important, actions that you can perform on a marked block or stave. A block can be re-tailed, shifted, accented, have its note style changed or its repeat-bar marks expanded; a stave can also be re-tailed.

Re-tailing a stave or block

Rhapsody has a facility for altering the tail direction of notes. You can set all the tails in an area to point upwards or downwards, or you can tell Rhapsody to set the tails in both directions according to the note's height up the score.

- To re-tail a stave, click Menu over the stave, and follow Stave ▶ Re-tail ▶
- To re-tail a block, click Menu over the score containing the block, and follow Block ▶ Re-tail ▶.

In both cases, a submenu appears:

```
     Re-tail
Auto tails
Up tails
Down tails
```
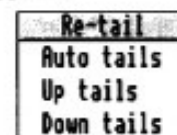
- Choose Auto tails to set those tails belonging to notes above the middle line of the stave to point downwards, and those belonging to notes below the middle line of the stave to point upwards. Notes on the middle line of the stave normally point downwards but Rhapsody will make it point upwards if the two notes on either side seem to warrant it.
- Choose Up tails to set all the tails in the stave or block to point upwards.
- Choose Down tails to set all the tails in the stave or block to point downwards.

Example: reducing a four-part score

To reduce a four-part SATB (Soprano, Alto, Treble, Bass) vocal score to two staves (useful when producing keyboard parts for rehearsals), follow these steps in sequence:

① Click Menu over the soprano stave, and choose Stave ♦ Re-tail ♦ Up.
② Do the same for the tenor stave.
③ Click Menu over the alto stave, and choose Stave ♦ Re-tail ♦ Down.
④ Do the same for the bass stave.
⑤ Make sure the soprano and alto staves are both in the treble clef throughout. Removing clefs will automatically shift subsequent notes so that they are played correctly.
⑥ Make sure the tenor and bass staves are both in the bass clef throughout. You will probably need to change the tenor stave's initial clef too.
● Place the cursor at the beginning of the soprano stave.
⑧ Click Menu over the alto stave, and choose Stave ♦ Copy ♦ Everything.
⑨ In the same way, copy the bass stave onto the tenor stave.
⑩ Delete the alto and bass staves using Stave ♦ Delete.

Shifting a block

Sometimes you may need to shift a block of music up or down a fixed number of lines. This is different from transposing in that the intervals between notes can change, since Rhapsody does not alter the accidentals: an F sharp might become an E sharp (1 semitone change) where an A flat became a G flat (2 semitones change). Shifting a block is useful when you are dealing with different clefs, since they alter which *line* corresponds to which note.

When you place, alter, or remove a clef, Rhapsody automatically shifts the notes for you. The shift feature is most useful to correct the results of accidentally copying a section of music into the wrong clef, or where the exact pitch of the notes does not matter (e.g. for those percussion instruments whose tuning is not exact, but which can be played high or low).

Also, shifting a block by 7 lines is identical to transposing it by one octave, and is significantly faster.

● To shift a block, follow Block ♦ Shift ♦ to pop up the Shift window:

Enter a value into the writable icon, or use the bump arrows, to alter the number of lines by which the music is shifted.

Click on the Up or Down radio icons to change whether the shift is performed upwards or downwards.

Now select the items which you want to shift (in this case the 'All notes' icon). The Select button will select the item while the Adjust button will deselect it.

Finally click on the OK icon.

If you wish to shift a single part on a two-part stave, choose Up tails only or Down tails only instead of All notes.

Shift
⦿ Up ◯ Down
Lines [0] △
All notes
Up tails only
Down tails only
All text
Text at cursor
Pedal
Octavo
Directives
Dynamics
Bowing marks
Pauses
Hairpins etc.
Phrase marks
Square brackets
Guitar chords
OK
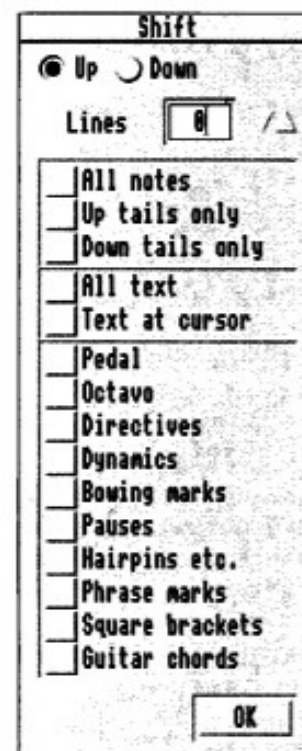
Shifting text

If you want to move some text up or down one or more staves, mark the block containing all the text you want to shift and proceed in the same way as before except select the All text icon.

If you want to move a single line of text, mark the block as before, then put the red arrows over the line of text you want to move. Bring up the Shift window and select Text at cursor.

Shifting other objects

A large variety of other types of object can be shifted in the same way. Choose the appropriate items from the list of icons before pressing the OK button. Any combination of notes, text or other items may be selected and shifted in one go.

Accenting a block

It is sometimes useful to be able to give all notes within a block the same accent (staccato, marcato, etc.) The Block accents menu allows you to do this quickly.

- Select Block ▶ Accent ▶ Unaccented to *remove all accents* from the block.
- Select Block ▶ Accent ▶ Staccato to give notes a *staccato* dot. (.)
- Select Block ▶ Accent ▶ Spiccato to give notes a *spiccato* 'spike'. (')
- Select Block ▶ Accent ▶ Tenuto to give notes a *tenuto* line. (-)
- Select Block ▶ Accent ▶ Accented to give notes an *accent* mark. (>)
- Select Block ▶ Accent ▶ Stressed to give notes a '*hat*'. (^)
- Select Block ▶ Accent ▶ Sforzando to give notes an *sf* direction.
- Select Block ▶ Accent ▶ Forte-piano to give notes a *fp* direction.
- Select Block ▶ Accent ▶ Silent to make each note *silent*.

Cue parts can be silenced using the last option. Note that this is the only way that an individual note or group of notes can be silenced.

If the same pattern of accents is to be repeated it is normal to write out the first few bars and leave the rest apparently unaccented, along with the direction *simile*. To achieve this effect in Rhapsody, accent all the notes, and use the Suppress accents symbol (see page 80) to prevent Rhapsody from printing all but the first few bars' worth of accents. This is better than leaving notes unaccented, because Rhapsody will be able to play the accents correctly.

Setting the note style for a block

Notes can be entered in several different styles. The note style menu allows you to change all the notes within the block to a particular style.

```
  Note style
Normal      ▷
Small       ▷
Cross       ▷
Diamond     ▷
Open diamond ▷
Headless    ▷
```

- Select Block ▶ Note style ▶ Normal to make notes the normal size and shape.
- Select Block ▶ Note style ▶ Small to make notes smaller. This is used for alternative (ossia) notes. For cue parts, where the beams must also be made smaller, it is preferable to use Block ▶ Part style ▶ Cue.
- Select Block ▶ Note style ▶ Cross to give notes cross-heads. This is used for

notes with indeterminate pitch, for example, shouts.

- Select Block ▶ Note style ▶ Diamond to give notes medieval-style diamond heads.
- Select Block ▶ Note style ▶ Open diamond This style is also used for some notes in modern music, for example, artificial harmonics.
- Select Block ▶ Note style ▶ Headless This style is sometimes used to indicate just a rhythm on its own.

Here is an example of the various note styles.

All these note styles can be applied to individual notes within a single note cluster using the icons on the main panel. Using these note styles does not change the beams in any way, nor does it alter the way the notes are played.

All these styles can be applied either to all the notes in the block or up tails or down tails only in the usual way.

Setting the part style for a block

The part style menu allows you to apply certain effects which apply to a *part* rather than to individual notes.

```
  Part style
Normal      ▷
Slurred     ▷
Cue         ▷
Stemless    ▷
-----------------
Double value
Halve value
```

- Select Block ▶ Part style ▶ Normal to return the part to normal.
- Select Block ▶ Part style ▶ Slurred to slur the notes in the block together. Be careful not to include the last note in the slurred group inside the block otherwise this note will get slurred to the next.

- Select Block ▶ Part style ▶ Cue to reduce the size of all the notes *and the beams* of all the notes in the block. Use this option rather that the small notehead style for cue parts.
- Select Block ▶ Part style ▶ Stemless for a rather special effect, often used with plainsong chants, or (in conjunction with Block ▶ Note style ▶ Headless) to produce invisible notes, which can be used as a fudge to enable accidentals, acciaccaturas, etc. to appear without a parent note.

All these part styles can be applied either to all the notes in the block or up tails or down tails only in the usual way.

Here is an example of the different styles for comparison.

The last two choices of this menu also allow you to double or halve the lengths of all the notes in the block. This can be useful if you start writing a piece in 3/4 time and later decide that it should be in 3/8 for example.

Kerning a block

Kerning and unkerning a bar was described on page 93. This option allows you to apply the same effect to part or even the whole of a score. The kerning (and unkerning) process recalculates all the offsets and slot widths from scratch so you should not kern or unkern a block in which you have invested some time micro adjusting the precise positions of accidentals and notes.

12. Formatting a score

Before considering how to format a score, we should describe how to enter titles, page numbers, headers and footers.

Headings

In order to enter the title of your piece and other headings, choose Score "" ▶ Headings... from the main score menu. This opens the headings window:
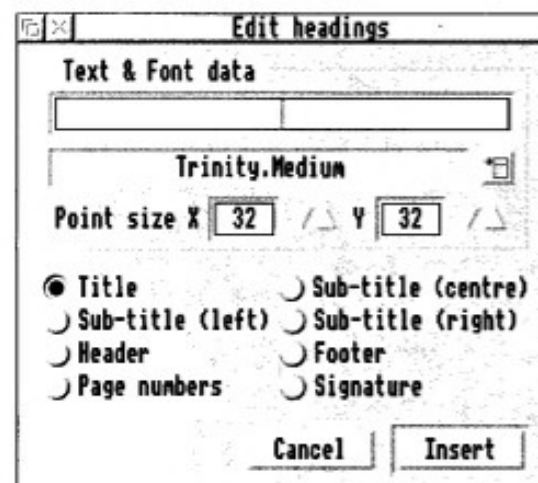
There are eight different headings which you can insert:

1) the Title which is centred at the top of the score
2) the Sub-title which is centred at the top of the score below the title
3) the left Sub title which is placed immediately above the score on the left
4) the right Sub title which is placed immediately above the score on the right
5) the Header which is printed at the top of every page and may be left or right justified or centred
6) the Footer which is printed at the bottom of every page and may be left or right justified or centred
7) the Page number format which is printed on every page in a variety of positions (see Print Options below)
8) the Signature which is printed at the very end of the score

To insert one of these headings, select the appropriate radio icon, type the text into the writable icon, choose a suitable font by clicking on the menu icon beside the font name and selecting one from the font menu, set the point size either by writing in the writable icons or by using the bump arrows and finally click on Insert. (When entering several headings, it is not actually necessary to click on Insert every time - just set up the eight headings the way you want them and then click on Insert once.)

If you want a heading to be split over two or more lines, use the symbol ' | ' (the vertical bar to the left of the Z key) to indicate a new line. In this way you can achieve effects like the following:

Longfellow's Carol

Words by
H.W.Longfellow
(1807-82)

ALLEN PERCEVAL
(B. 1925)

To delete a heading, simply delete all the text (eg by putting the caret into the input line and pressing Ctrl-U) and then click on Insert to insert a blank header.

To close the window without entering any changes, click on Cancel.

Formats

Rhapsody has a unique data structure which allows it to store information about how the score is to be laid out on a particular set of pages, quite independently of the music data. Such a data set is called a **format** and virtually any number of formats can be created and edited within a score. Each format copes with a different paper size or a different selection of parts etc. etc.. Every score has to have one unique format, namely the linear format in which the music data is normally edited. This format always contains all the staves and consists of just one **system** which is as long as the score. For obvious reasons, this format cannot be printed. All the other formats are called **paged** formats and you must create at least one paged format before you can print a score.

Creating a format

To do this choose Format ♦ Create... from the main menu. (Alternatively, put the cursor in the score you wish to format and bring the linear format window to the front, then press the Print key (sometimes called PrintScrn). The following window will appear:
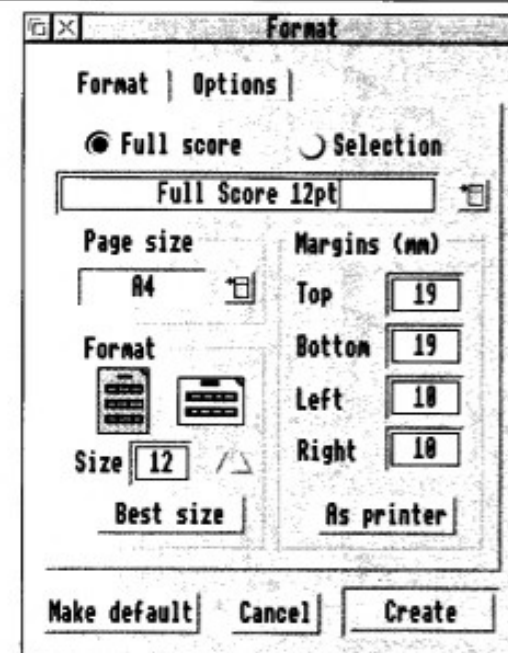
Like the Print options window, this one has a number of tabs. The Format tab allows you to set up details about the layout while the Options tab allows you to specify how such things as page numbers etc are handled.

The first thing to decide is whether you want to print all the staves (ie a 'full score') or just a selection.
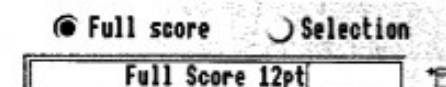
If you decide on a selection, a click on the menu icon to the right of the format name will bring up a menu listing all the staves. Using the Adjust button (so that the menu stays open) select those staves which you wish to include in the format. Close the menu either by making your last selection with the Select button or clicking outside the menu. Having done this, you will see that a suitable name has appeared in the Format name icon. You may wish to change this eg by writing in something like **Brass Section** for example.

Next we need to set up the page size and the margins:
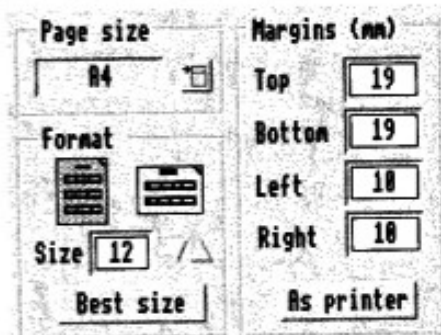
Choose a suitable page size by making a selection from the menu provided. (The list of page sizes is stored in *!Rhapsody4.Resources.PageSizes* and may be added to if required. See the file itself for clarification).

The panel below invites you to choose whether to print your score with the page upright (portrait mode) or sideways (landscape mode) and to enter a point size. The standard point size for performing scores is 12 points. It sometimes happens, however, that decreasing the point size to say 11 points, may result in the ability to put an extra system on every page. If you click on the Best size icon, Rhapsody will select the point size close to the one you have entered which maximises the point size while minimising the number of pages required.

The panel on the right lets you enter the size of the margins that you need. It is important that you leave sufficient margins because many printers cannot print right to the edge of the paper - nor would you want this anyway. If you click on the As printer icon, the margins will be set according to the information returned by the currently active printer driver. It is wise to add a couple of millimetres to these figures to be on the safe side.

The Options page looks like this.
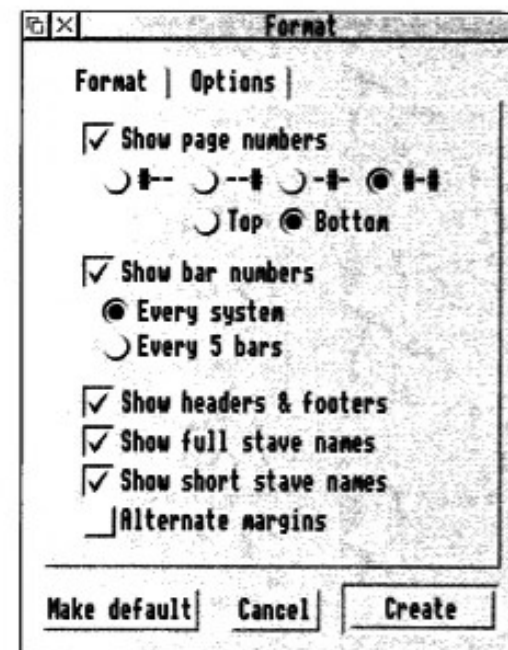
Most of it should be self-explanatory but it is worth mentioning that the four options for the position of the page numbers are **centred, left, right,** and **alternate left and right** with odd numbers on the right.

Also, when **Alternate margins** is selected, the margins set will be used for the odd numbered (ie right hand) pages. If you intend to bind the pages together, for example, the left hand margin should therefore be greater than the right hand margin.

When you are satisfied with all the options and settings, click on the Create icon to create the format. If you wish to save the settings and use them regularly, click on Make default. If you decide to abandon the format, click on Cancel.

When you create a new format, a new view of the score is opened showing exactly what that format looks like on the printed page. This window can be scaled and manipulated just like the linear format window and you can put the cursor in it, add and delete notes, move symbols around, mark blocks, delete staves - anything in fact. The only problem being that if you do anything which changes the dimensions of the score - eg its width or its height, the formatting will look strange. It is for this reason that facilities are provided to reconstruct part or all of a format and to do various other things.

Reconstructing a format

If you have performed some editing which has made a nonsense of an existing format and you would like to replace it with a new one using the same initial settings (eg page sizes, point size etc.) or if you simply wish to make some changes to an existing format, choose Format ♦ Reconstruct ♦ from the main menu. You can choose which format to reconstruct from the list of format names given. The format window will open to give you the chance to make the necessary changes. Clicking on Reconstruct will reconstruct the format for you.

Deleting a format

A format can be deleted in a similar way by choosing Format ♦ Delete ♦

Printing a format

If you know exactly which format you want to print this can be done by choosing Format ♦ Print ♦ from the main menu but since the paged format itself may not be visible it is probably better to gain access to the print routines through the format menu described below.

Editing a format

When you create a format, Rhapsody works out where the lines of music end and where they go on the page. It is possible to fine tune the layout in a number of important ways. First let me explain what a *system* is.

A system is a single line of music stretching across the width of the page. It may have just one stave in it or it may have several staves. It always begins with a clef and a key signature on every stave (except blank staves) and all the staves are joined at the left hand end with a single thin barline. The first system is automatically indented and the stave name (if present) is printed there. The abbreviated stave name (if present) is printed in front of the staves in all the other systems.

Moving a system

In any paged format window, the printer margins are shown shaded and the margins you have set are shown in green. The limits of the systems are also shown in green and in the top left hand corner of each system there is a green 'handle'. You can move any system up and down the page using this handle by dragging it with the Select button. Whenever you move a system in this way, the rest of the score below the system is repaginated - that is to say, Rhapsody works out the best place to put all the subsequent systems. Suppose, for example, your score has four systems but three of them just fit on page 1. You may think that your score would

look better if there were just two systems on each page. To do this, move the first system down the page sufficiently far to force the third system on to the next page.

While this is a very useful feature, it does mean that you must work your way down the score from top to bottom when adjusting the systems. For example, suppose that you have a score which has a repeated section in the middle and which works out to be one system short of 4 pages long. If you adjust the last system to end the piece nicely and then decide to move (or reformat) another system earlier on (for example, so as to get the repeated section on the first page), Rhapsody will probably mess up the final page again.

Resizing a system

In addition to the green handle which enables you to move the whole system up and down, each stave is provided with a pair of small red handles which allow you to change the size of the staves individually for that system only. For example, it may be that a certain passage is particularly high for one instrument and its note stems overlap with the lyrics or other features of the stave above. This can be corrected by enlarging the top space of the stave (or the bottom space of the one above).

Note that, as with moving a system, this causes the rest of the score below to be repaginated.

Selecting staves on a system

In orchestral scores, it often happens that one or more instruments is silent for the duration of a whole system. If this is the case, it saves space and paper if those instruments are not printed for that system. To achieve this, click the Menu button over the system you want to change and open the System ♦ sub menu. The following menu will appear:

```
    System
Save page          ▷
----------------------
Select             ▷
Reformat system
Add bar
Remove bar
Reformat to end
Repaginate to end
```
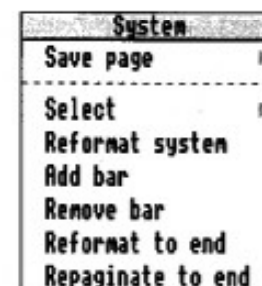
Move over Select ♦ to reach the menu of staves. Those staves present in the system (initially all of them) will be ticked. Click on the menu items with either

Select or Adjust to toggle the staves on and off. (As usual, using the Adjust button keeps the menu open for you)

Since selecting or deselecting a stave will alter the total height of the system, this also forces the rest of the score to be repaginated.

Adding and removing bars from a system

When Rhapsody creates a new format, it automatically fits as many bars as it can on each system. Almost inevitably you will want to remove some bars from the most crowded systems in order to fill out the last page of the score. Occasionally you may want to cram the odd extra bar into a system in order, for example, to make a repeated section come at the very end of a page. And sometimes you may want to simply reformat a system without adding or removing a bar - if, for example, you have made a small alteration to a slot width or added a note.

Adding or removing a bar is a fairly drastic action and will reformat and repaginate all the following systems in the score; however, reformatting a single system has no effect on the subsequent systems.

Reformatting and re-paginating part of a score

The last two items on the menu allow you to reformat and/or repaginate part of a score. Since reformatting may change the length or even the height of a system, reformatting automatically includes repagination.

Tips on formatting

It will be clear from what has been said above that, because some actions override others, it is important to do things in the right order. Normally, the first thing to do after creating a new format is to add and remove bars from the top of the score until all the systems are the right length. Next you should suppress any staves that are empty and which you do not want printed. Lastly you should move any systems which do not look exactly right.

If you were to add or remove a bar after you had suppressed some staves, these staves will reappear when that section of the score is reformatted. Likewise, if you change your mind about suppressing a stave after you have moved the systems to the right place, Rhapsody will move the systems back again when it repaginates the rest of the score! Remember that you can always reformat a single system without affecting any other part of the score.

13. Print options & Printing

Print Options

To display the Print options window, choose Score "" ♦ Print options... from the main score menu. The window has three 'tabbed' pages of which the first is Group 1.

Group 1

The window is divided into four panels:
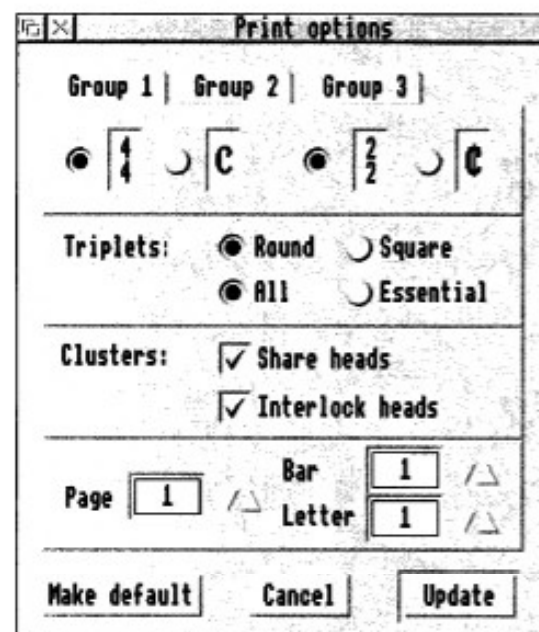
The first pair of radio icons allows you to choose whether to print the common time signature as $\frac{4}{4}$ or C. Likewise the second enables you to select between $\frac{2}{2}$ or $\mathbb{C}$ for alla breve time.

In the next panel are two further pairs of radio icons, The first allows you to select between two styles of triplet braces illustrated below; the first places the number in a gap, the second places the number below the brace.

In a piece of music where there are lots on triplet quavers, the groupings of the triplets are obvious from the way the notes are beamed. The second radio pair allows you to turn off the printing of the braces (but not the little 3) where the beams make the slurs unnecessary. This is illustrated in the second of the examples shown below which also illustrates what happens when slurs are used at the same time as triplet braces.

(In some cases, you may wish to turn off the printing of triplets signs altogether. This is done using the Suppress triplets symbol to be found in the symbols window. For more details on this see page 80).

In the third panel there are two option icons. The first tells Rhapsody what to do when two notes with different tail directions and different note values occupy the same line on the stave. The second tells Rhapsody what to do when a downtail note is higher then an uptail note on the same stave. Compare the following two examples to see what the difference is. The first example is printed with both options off, the second with both options on.

If you want to share a white note and a black note as in the example below, you should make the black note headless so that it does not overprint the white note.

Note that, unlike all the other options described in this section, which take effect immediately throughout the score, the share heads and interlock options only take effect when the slot containing the relevant notes is edited in some way. Normally you should set the option before you enter any notes. If, however, you want to change the option throughout an already existing score, set the option as required then mark the whole score as a single block and choose **Block ▶ Unkern**. This will recalculate all the slot widths from scratch and reposition the noteheads.

Use the writable icons or the bump arrows in the fourth panel to set the initial bar number, the initial rehearsal letter/number and the initial page number. If Rehearsal letters are selected, using Group 2 below, then the numbers relate to the position of the letter in the alphabet eg 1=A, B=2 etc. (Note that if the format used has the alternate page option set, the *even* numbered pages will have the left and right margins swapped.).

Group 2

The second page contains further general options. Pedal marks can be printed in two different styles depending on your preference and rehearsal signs can be either letters or numbers.

An option is provided to omit first time bars when numbering bars. This is usually

desirable in simple 8 or 16 bar melodies with single 1st time bars. In complex music with several first time bars, you might as well include all of them in the count. The last panel contains an option to print old style rather than modern style clefs.

Group 3
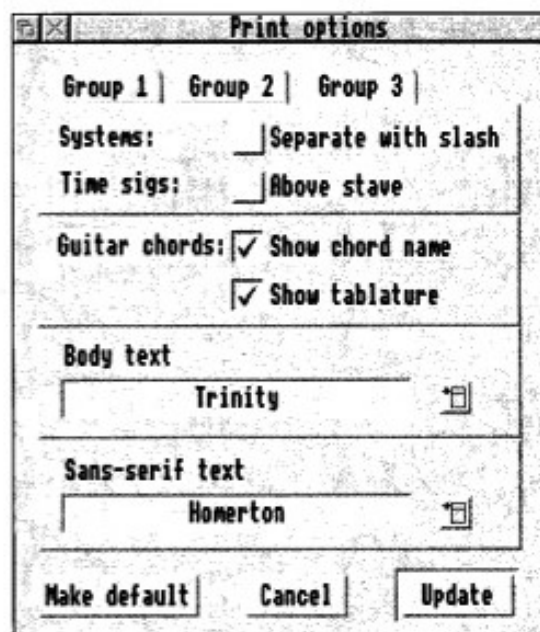
In orchestral scores, it is usual to separate systems with a slash sign to draw the conductors attention to the fact that there is more than one system on the stave. This symbol is not usually used in piano music. Click Separate with slash to switch this option on.

If your score has many time signature changes in it (eg almost every bar) it is sometimes preferable to write the time signature over the top of the score rather than on the staves themselves. Again, this is most useful in large orchestral scores where the time signatures appear over each orchestral section rather than over every stave. Select (Time sigs:) Above stave to enable this feature.

The third panel determines the way in which guitar chords are printed, that is to say with or without the chord name and with or without the tablature (ie the finger map). The icons in the last two panels allow you to change the default fonts used in the score.

Body text is used for all lyrics, tempo and dynamic directives, dynamic markings etc. It is also the font used when you enter any of the font directives \N, \B, \I or \D (and their small equivalents) in any text (see page 83). The Sans-serif text is not used by Rhapsody but is the font used when you use either of the directives \G or \H in your text. To change either of these fonts, click on the menu opener icon to the right of the font name and choose a suitable font.

Note that the chosen body font should have normal, italic (or oblique) and bold variations and the sans-serif font should have a bold version in order to work properly, otherwise the basic font will be used for all variations.

When you have selected all the options you required, click on Update to implement them (or Cancel to close the window without implementing them). When implemented, print options are stored in the score itself. Different scores can therefore have different print options. If you click on the Make default icon, the current set of options will be saved in Rhapsody's Preferences file and will be used for any new scores which you create subsequently.

Printing a score

When a score has been formatted and you are happy with its appearance, it can be printed. Choose Score "" ♦ Print and the Print window will appear.
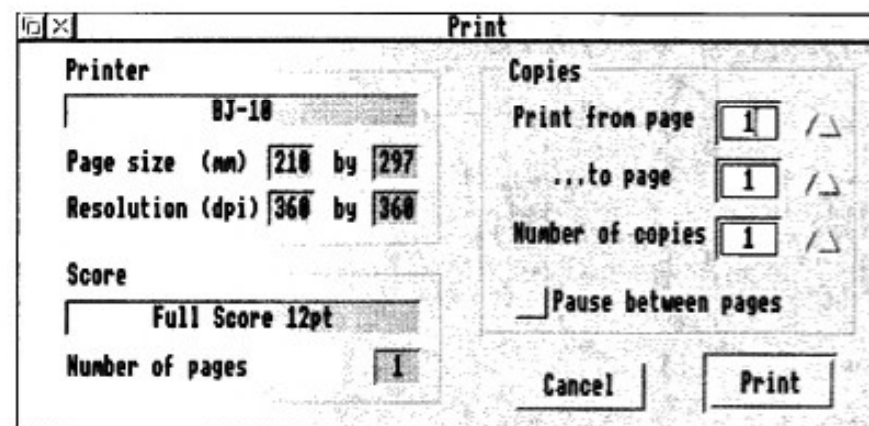
13. Printing

On the left is displayed some useful information about the printer driver which is currently installed, the name of the format which is about to be printed and the number of pages it will need.

Either write in the writable icons on the right or use the bump arrows to set the initial and final pages which are to be printed and the number of copies you require. If your printer does not have a sheet feeder, it is a good idea to choose 'Pause between pages'. Now make quite sure that the printer is on line and that it has an adequate amount of paper, and click Print. All being well, the following window will indicate the progress of the print run:

```
┌──────────────── Printing ─────────────────┐
│  ┌──────────────────────────────────────┐ │
│  │                                      │ │
│  │        Printing in progress          │ │
│  │                                      │ │
│  └──────────────────────────────────────┘ │
│    Pause        Abort        Continue      │
└────────────────────────────────────────────┘
```
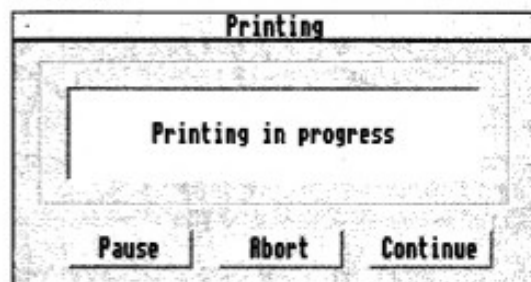
If something goes wrong during printing, it may be possible to escape by clicking on Pause or Abort but owing to the fact that the operating system routines virtually freeze the machine during printing, printing may not stop until it has printed the rest of the page. Pressing the Escape key may help in some circumstances but it should only be used as a last resort.

14. Customising Rhapsody

Preferences

Many of the settings used in the program can be changed using the Preferences window. To open the window, select Preferences... from the iconbar menu. The window has four tabbed pages of which the first is:

```
┌─────────────────── Preferences ───────────────────┐
│  Display │ Options │ Dynamics │ Config │           │
│                                                    │
│   ☑ Beams    ☑ Bar numbers  ☑ Spots               │
│   ☐ Timings  ☑ Extended cursor                    │
│                                                    │
│   Colours                                          │
│   Cursor          🔲 Speed changes   🔲           │
│   Cursor outline  🔲 Volume changes  🔲           │
│   Step capture    🔲 Timings         🔲           │
│   Control spots   🔲 Bar numbers     🔲           │
│   Size handles    🔲 Hidden dynamics 🔲           │
│                                                    │
│  Make default      Cancel        Update            │
└────────────────────────────────────────────────────┘
```
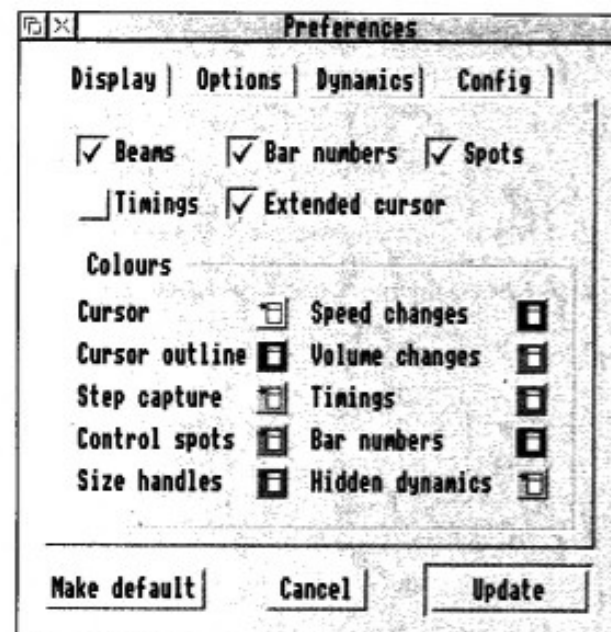
These options alter what is shown in Rhapsody's *linear format* window; they do not affect how the score is formatted or printed.

- Select Beams to tell Rhapsody to join together short notes. If Beams is not selected, Rhapsody will print all quavers, semiquavers, etc., in the linear mode window separately - this makes editing slightly faster.
- Select Bar numbers to tell Rhapsody to display the bar number every five bars.
- Select Spots to tell Rhapsody to display the control spots of hairpins and phrase marks.
- Select Timings to tell Rhapsody to display the approximate time elapsed since the beginning of the score at the top of each bar. Note that this time takes tempo changes into account but not repeats.
- Select Extended cursor to tell Rhapsody to draw the outer parts of the cursor, showing all the available positions, rather than just the portion which can be clicked on.

The remaining section of the window allows you to alter the colours used in the windows. In each case, clicking on the menu button brings up a menu of the desktop colours, from which you can make your selection.

- Click on **Cursor** to alter the colour of the interior of the cursor.
- Click on **Cursor outline** to alter the colour of the outline of the cursor.
- Click on **Step capture** to alter the colour of the cursor during step capture. (The cursor changes colour to show that only limited editing can be performed.)
- Click on **Control spots** to alter the colour of the control spots of hairpins and dynamics, if they are shown.
- Click on **Size handles** to alter the colour of the guidelines around a formatted system, which allow you to alter the spacing between systems.
- Click on **Speed changes** to alter the colour of the text denoting a change in speed.
- Click on **Volume changes** to alter the colour of the text denoting a change in volume.
- Click on **Timings** to alter the colour of the timing information across the top of the score, if it is shown.
- Click on **Bar numbers** to alter the colour of bar numbers, if they are shown.
- Click on **Hidden dynamics** to alter the colour of dynamics which are 'hidden', that is, that will not be formatted or printed, and which affect playing only.

Options

When the Options tab is selected, the window appears like this:
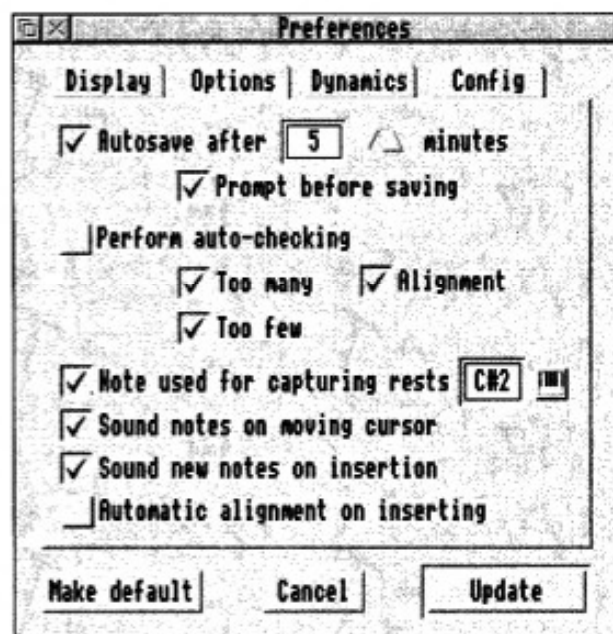
This window shows various options regarding Rhapsody's behaviour.

- Select Autosave to toggle whether Rhapsody saves your work automatically at intervals.
- Enter a value into the ... minutes writable icon, or use the bump arrows, to change the time that elapses before Rhapsody saves your work automatically, if Autosave is selected.
- Select Prompt before saving to have Rhapsody bring up a window reminding you that an autosave is due, if Autosave is selected. Only those scores which have been loaded from disc or which have already been saved in the session can be autosaved, because Rhapsody will not know the filename you want to use until you save it for the first time.
- Select Perform auto-checking to have Rhapsody check your music for bars of incorrect length or alignment.
- Select Too many to have Rhapsody check your music for bars which appear to be too long, if Perform auto-checking is selected.
- Select Alignment to have Rhapsody check your music for bars which appear to be incorrectly aligned, if Perform auto-checking is selected.
- Select Too few to have Rhapsody check your music for bars which appear to be too short, if Perform auto-checking is selected. The first and last bars in a score are never checked, as they do not have to be a whole bar long.
- Select Note used for capturing rests to reserve a note on the MIDI instrument which, when played in step capture mode, inputs a rest rather than that note.
- Enter a note into the writable icon to the right, in the format C#4, Db-1, A2, etc. (with the hash and the letter 'b' denoting sharps and flats), to change this note, if Note used for capturing rests is selected.
- Click on the keyboard icon to the right of this to input the note from the MIDI instrument. A small window appears, showing that Rhapsody is waiting for you to play a note. You can play several notes to find the best one for your purpose. If you have a restricted keyboard, you can reach notes which are off the end of the keyboard by selecting a suitable octave shift. When you find the note you want, click OK; or you can revert to the previous setting by clicking Cancel.
- Select Sound notes on moving cursor to have Rhapsody play notes with the relevant instrument and voice (MIDI or internal) as you move the cursor around the score.
- Select Sound new notes on insertion to have Rhapsody play notes with the relevant instrument and voice (MIDI or internal) as they are inserted, in any edit mode.
- Select Automatic alignment on insertion to have Rhapsody check and realign a bar as notes are inserted, in any edit mode.

Dynamics

When the Dynamics tab is selected, the window changes to show the *dynamics map*:
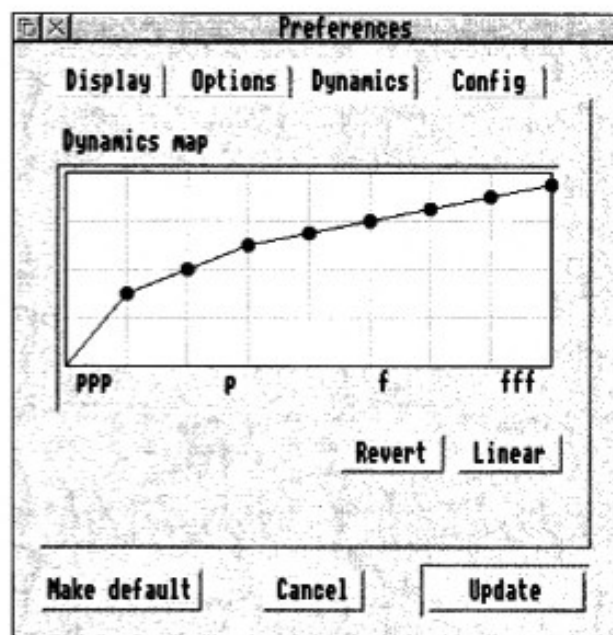
The response of the human ear, and most amplifiers, to loud sounds is different from that to quiet sounds. As a result, in order to have the dynamic range (*ppp* to *fff*) sound like a smooth gradation it may be necessary to alter the key velocity levels Rhapsody sends to your MIDI instrument for each dynamic. You can also use the dynamic map to make dynamics more or less subtly played.

Each spot on the graph represents a dynamic level, with *ppp* on the left and *fff* on the right. You can click on the vertical lines or drag the spots up and down, to alter the key velocity that dynamic level corresponds to. The higher the spot is, the louder and harsher that dynamic is played.

● Click Revert to return the setting to the way it was when you opened the Preferences window (the current setting).
● Click Linear to return to the default, linear setting.

Configuration

When the Config tab is selected, the window changes to:
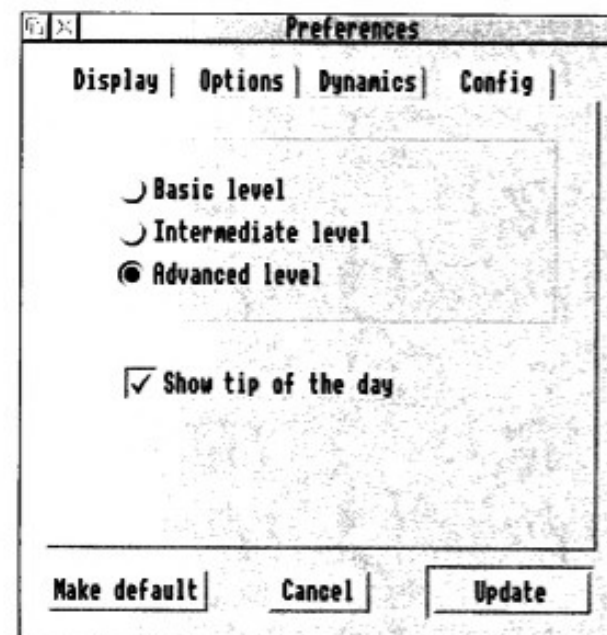
Rhapsody can be switched to one of three levels of simplicity. As supplied, all its features are enabled for advanced use but if you wish to restrict the number of musical symbols and other features which are available, for example, if you wish to use Rhapsody in a school with young pupils, you can select one of the simpler levels. The Basic level (which also has a restricted menu structure) is designed for pupils who are completely new to musical notation - generally Key stage 3 pupils. The Intermediate level is suitable for GCSE pupils and the Advanced level for A level pupils and general use. The precise set of symbols and features which are offered at each level is not fixed though and can easily be changed by altering the file in the Resources directory called Symbols. If you wish to exclude any symbol or button from the panel, use your favourite text editor (eg !Edit) to edit the first three characters of the relevant line of data. Put a / if you want that symbol included and a - if you want it excluded. eg the triplet -// will exclude the symbol form the basic level but include it in the intermediate and advanced levels. Then save the edited file. This can be done at any time even while Rhapsody is running. To make the change effective, simply click on the Update button at the bottom of the preferences window.

It is also possible to edit the symbols file in other ways - notably by changing the width of the symbols and their order and altering the keyboard shortcuts. On no account should the numbering of the symbols or the symbol strings be altered, nor should the position of the columns be changed.

Hints and tips

Whenever you start Rhapsody, you can elect for a window to appear which gives a little reminder of something which you may have forgotten or which you may have overlooked. Here is an example:

```
┌─────────────────────────────────────┐
│ ▣            !Rhapsody               │
├─────────────────────────────────────┤
│   Tip of the Day                     │
│  ┌────────────────────────────────┐  │
│  │                                │  │
│  │  To select a dotted crotchet, double  │
│  │    click on the crotchet symbol.   │  │
│  │   Alternatively, press F4 twice.  │  │
│  │                                │  │
│  └────────────────────────────────┘  │
│                                      │
│   Cancel                      ∨ ∧    │
└─────────────────────────────────────┘
```
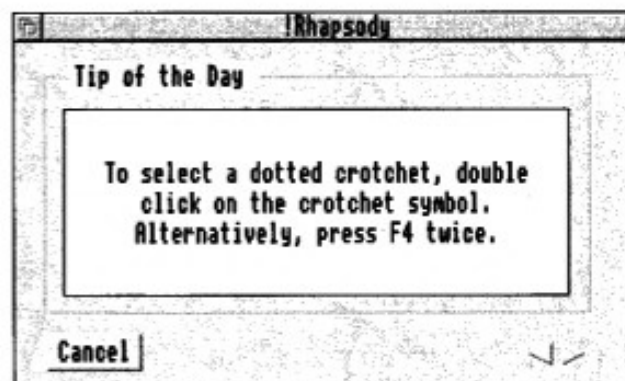
If you want to see the next or previous tip in the list, click on the bump arrows at the bottom.

To close the window, click on Cancel (or anywhere on the text, or press Escape)

If you do not want the tip of the day to appear, deselect this option.

Implementing your chosen preferences

When you have finished with the Preferences window:

● Click Update to keep the changes you have made, for this session only.
● Click Cancel to forget the changes you have made and go back to the previous setup.
● Click Make default to save the changes you have made so that this and all future sessions of Rhapsody use those settings.

The New scores directory

This directory is stored inside !Rhapsody and can be accessed by clicking on !Rhapsody4 with Shift held down.

It is very useful to have a collection of blank scores available with a single click which have everything set up the way you want them. Rhapsody 4 provides this facility through the New score ▶ submenu (on the icon bar menu). When you choose a blank score from this menu, Rhapsody fetches it from the NewScores directory. If you alter or delete any of the scores in this directory, or add your own, these changes will be reflected in the New score ▶ menu. For example, by default the blank scores are set up to use General MIDI voicings. You can edit the blank scores to reflect your music setup and save them back into the NewScores directory; then, whenever you open a new score, the voicings will be changed for you.

The score 'Blank' in the NewScores directory has special meaning for Rhapsody: a copy of it is created whenever you click Select on the iconbar icon. You can edit it as with any other of these scores, but you **must not delete** it or you will not be able to open a new score by clicking Select on the iconbar. (You would still be able to create scores from the New score ▶ option, however.)

The Resources directory

This directory is also stored inside !Rhapsody and can be accessed by clicking on !Rhapsody4 with Shift held down.

In addition to the settings available through the Preferences window, you can alter certain of the files within the Resources directory according to your needs. When it loads, Rhapsody uses information in these files to construct its windows and menus.

These files have been designed to be readable and alterable by the user. Some alternative files are provided with Rhapsody to begin with, which you may use or alter as you wish, in order to fit in with your setup and requirements. Details of the format of each file and how to edit it are included in the files themselves; what follows is just a brief description of what can be changed.

You should not delete any of these files.

The Symbols files

The Symbols file alters the appearance of the main panel. For details of what can be altered see page 141 above.

The Gchords file

You can alter the preset guitar chords using this file. Twelve sets of chords are provided, each set containing the same chord in all twelve keys. When transposing a score containing guitar chords, Rhapsody assumes that a chord exists for every key so, while is is possible to edit the names and the voicing suggested for individual chords, you are not advised to alter the chords themselves unless you alter the whole set.

The Pagesizes file

You can alter the width and length or the preset page sizes using this file.

The MIDIstrngs file

You can add to or alter the preset MIDI string menu using this file.

The Staves file

You can add to or alter the preset Add stave menu using this file.

The MIDI setup directory

This directory is also stored inside !Rhapsody. It tells Rhapsody what MIDI instruments are attached to what ports and channels and what the names of all the instruments are, that are available.

It **must** contain a file called Setup which defines what devices are attached to what channels and for each device mentioned in this file, there must be be a directory of the same name containing a file called Tones and possibly a file called Keymaps. The former lists the names of all the available voices while the latter lists the names of the drum samples or sound effects that are a associated with particular notes. A General MIDI tones file is provided. Other tones files may be available from Clares Micro Supplies.

If you take the trouble to create a new tones file for your instrument, please let us have a copy for distribution to other Rhapsody users. Ideally you should submit this via email to

djackson@clares.demon.co.uk

or alternatively please send it on disc.

Appendix A: The Menus

This section provides a reference for Rhapsody's menu structure. Every menu item is listed with a brief description of the item's function, with references to the body of the manual where appropriate.

The iconbar menu

```
    Rhapsody
 Info            ▷
 New score       ▷
 New view        ▷
 Discard score   ▷
 Show main panel
 MIDI thru
 Preferences...
 ------------------
 Quit
```
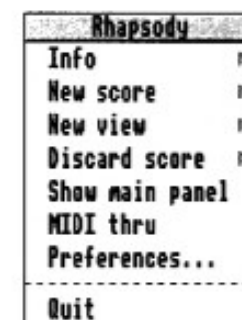
Obtained by clicking Menu on the !Rhapsody4 icon on the iconbar.

Info ♦

Provides information on the program and its version.

New score ♦

Loads one of the default scores contained in the Newscores directory.

New view ♦

Opens another window onto one of the scores in memory or opens a completely blank score.

Discard score ♦

Removes a score, or all scores, from memory. The list marks with a star * scores which have been altered since they were last saved, and with a tick scores which are currently visible in windows. Before an unsaved score is discarded you will be asked whether you want to save it.

MIDI thru

When ticked, this item causes any notes the computer receives through the MIDI input to be sent to the MIDI output (as well as being captured, if this mode is on). Notes are sent out on a channel and with a voice corresponding to the current position of the cursor, if there is one.

The effect of this option is to allow the user to practise playing on the instrument and voice corresponding to a particular stave, for example before capturing a passage. Setups involving more than one MIDI instrument will need this option.

Preferences...

Opens the Preferences window. For details of this window see page 137.

Quit

Exits the program. If any scores have been edited but not saved, Rhapsody will issue a warning before exiting.

The Score menu

Allows operations on a score. Calling up this menu whilst the pointer is over a score will affect that score (regardless of the position of the cursor, if any). The score affected will be called the *current score*.

Score ♦ Info ♦

Leads to a window detailing information about the current score, including its length and the time it would take to play.

Score ♦ Save ♦

Leads to a window allowing the current score to be saved, either in plain Rhapsody4 format, or compressed using Acorn's !Squash module. Rhapsody 4 will load either of these formats automatically. Note that Rhapsody 4 files are not

compatible with earlier versions of Rhapsody, and that files saved using Rhapsody 4 or earlier will not load into Rhapsody 4. To convert your files into the new format, use the supplied !R4Convert utility. The use of this is self explanatory when run but if you run !BubbleHelp as well, this will give useful information.

Score ♦ Save MIDI ♦

Leads to a window allowing the current score to be saved as a MIDI file. Rhapsody 4 will load MIDI files automatically. Note that MIDI files do not contain all the information in Rhapsody 4 files; if you save your work only as a MIDI file, all information not required to play the score (e.g. format information, text, key signatures) will be lost.

Score ♦ Save PMS ♦

Leads to a window allowing the current score to be saved as a PMS text file.

Score ♦ Print...

Opens a window allowing the current score, or certain pages from the score, to be printed using the current printer driver. The score must be formatted before you can print it. See page 123 for details.

Score ♦ Headings...

Opens a window allowing you to edit the text and style of the headings printed at the top of the current score when it is formatted. See page 123 for more details.

Score ♦ Copyright...

Opens a window allowing you to edit a copyright message which is inserted into the score. This message is never printed but simply indicates the ownership of the copyright on the score.

Score ♦ Print options...

Opens a window allowing you to alter aspects of the formatting style, for example, how time signatures and rehearsal marks are shown. These options are saved with each score. By making the current selection the default, you set the options for the current score and for all subsequent scores. See page 131 for more details.

Score ♦ Transpose...

Opens a window allowing you to transpose the entire current score by a number of semitones up or down. The key signature for each stave is altered. If the score includes parts for transposing instruments, the intervals will be unchanged, so that a score written in E flat for a B flat clarinet (concert F), for example, if transposed down one semitone would produce a piece in D (concert E) for the same instrument, and will play as such. See page 113 for more details.

Score ▶ Duplicate

Creates a new score identical to the current score, and opens it for editing. This score is independent of the original and can be edited separately. Note the difference between this option and New view on the iconbar or View menus.

Score ▶ Clear

Removes everything from the current score except for the clef, key and time signature slots. Stave data is retained. This item can be used to clear out a score before creating a new piece for the same instrumentation.

Score ▶ Discard

Deletes the current score and removes it from memory. If there is unsaved work in the score you will be asked if you want to save it first. There is a similar item on the iconbar menu (Discard score ▶).

Score ▶ Clipboard

Leads to a short menu which allows you to copy the current score to the clipboard, swap the current score with that on the clipboard or retrieve the score stored in the clipboard, overwriting the current one.

The Stave menu

Allows operations on a single stave. Calling up this menu whilst the pointer is over a stave will affect that stave (regardless of the position of the cursor, if any).

Stave ▶ Add stave ▶

Adds a new stave below the current stave if the menu button is pressed over the lower half of the stave or above the current stave if the menu button is pressed over the upper half. The stave is created with default properties, which can be changed using the Alter stave... option. Alternatively, a whole group of staves may be added in one go by selecting from the list of default staves provided. This list may be customised to your own requirements (see page 143).

Stave ▶ Alter stave...

Opens a window allowing you to alter information about the stave, for example names, MIDI tone number, style, stereo position, etc. See page 102 for more details.

Stave ▶ Re-tail ▶

Leads to a menu allowing you to change the directions of note tails across the whole stave. See page 117 for more details.

Stave ▶ Transpose ▶

Leads to a window allowing you to transpose a single stave up or down a number of semitones. The same notes apply as for Transpose ▶ on the Score menu.

Stave ▶ Copy ▶

Copies the entire stave onto the stave containing the cursor. If the cursor stave already contains notes these are merged with those of the new stave. Following the arrow leads to a menu allowing you to select what is copied. See page 114 for more details.

Stave ▶ Clear ▶

Clears the stave. Following the arrow allows you to select what is cleared. See page 116 for more details.

Stave ▶ Delete

Removes the stave from the score entirely. You will be prompted if the stave contains anything. If the score only contains one stave you will not be allowed to delete it.

The System menu
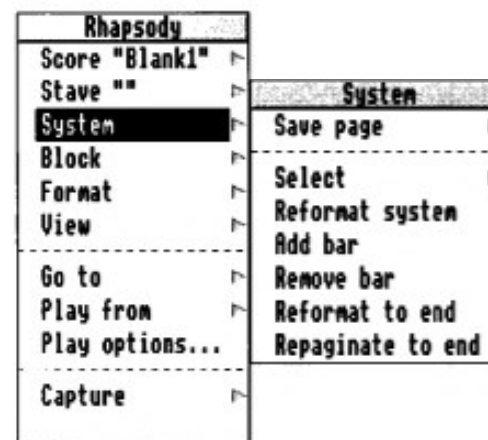
Allows operations on a single system (or page) in a formatted score. The items in this menu are not available from the original editing window, only a formatted window. Calling up this menu whilst the pointer is over a system will affect that system (or page) (regardless of the position of the cursor, if any).

System ▶ Save page ▶

Leads to a save window which allows you to save the formatted page as a Draw file. The file thus created can be imported directly into a DTP program for example.

System ▶ Select ▶

Leads to a menu enabling you to select which staves are displayed and which omitted, for the current system. Currently displayed staves are marked with a tick.

System ▶ Reformat system

Arranges the system to fit across the width of the page. If editing is performed whilst the format window is open, the system may become longer or shorter than the width of the page. It will not reformat itself until this option (or Format to end) is selected. This option does not affect the rest of the score.

System ▶ Add bar

Adds a bar from the next system to the current system, squashing up the notes inside it, and reformats the remainder of the score. When altering the format of the score using Add bar and Remove bar be sure to work from the top of the score downwards, otherwise the reformatting will cause previous added or removed bars to be re-assimilated.

System ▶ Remove bar

Removes a bar from the current system and adds it to the next system, spacing out the notes in the current system, and reformats the remainder of the score. The same comment applies as for Add bar, above.

System ▶ Reformat to end

Reformats the entire score from the current system downwards. All bars added or removed below the current system are re-assimilated.

System ▶ Repaginate to end

Repaginates the entire score from the current system downwards. This option does not reformat the score, it simply packs as many systems as it can into every page. It is useful if you have moved or widened a system.

The Block menu
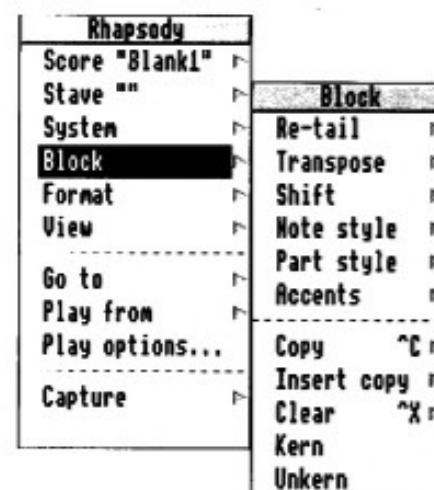
Allows operations on a marked block, created by double-clicking and dragging over the score.

Block ▶ Re-tail ▶

Leads to a menu allowing you to change the directions of note tails within the block. See page 117 for more details.

Block ▶ Transpose ▶

Leads to a window enabling you to transpose the block up or down a number of semitones. This is done without changing the key signature. See page 113 for more details.

Block ▶ Shift ▶

Moves the notes in the block up or down a number of lines, regardless of the perceived pitch of the notes. Accidentals remain unchanged. This is useful when working in different clefs, and to move passages up or down by octaves (it is faster than Transpose). Note that if used on its own Shift ▶ may change the intervals between successive notes. See page 118 for more details.

Block ▶ Accent ▶

Leads to a menu listing the different types of accent; these items apply the relevant accent to all the notes within the block. See page 120 for more details.

Block ▶ Note style ▶

Leads to a menu listing the different note styles. These options change the note type of all notes within the block. See page 120 for more details.

Block ▶ Copy ▶

Copies the marked block to the cursor, and merges it with any existing notes in the score beyond the cursor. The cursor marks the top left hand corner of the new block. If there are not as many staves below the cursor as there are in the block, Rhapsody will complain. Following the arrow leads to a menu enabling you to select what is copied. See page 115 for more details.

Block ▶ Insert copy ▶.

Creates a space for the marked block after the cursor, and copies the marked block into it. If there are fewer staves below the cursor as there are in the block, Rhapsody will complain. Following the arrow leads to a menu enabling you to select what is copied. See page 115 for more details.

Block ▶ Clear ▶

Clears the block of the selected items. See page 116 for more details.

Block ▶ Kern ▶

Optimises the spacing of notes within the block. See page 122 for more details.

Block ▶ Unkern ▶

Sets note spacings within the block to their default values. See page 122 for more details.

The Format menu

```
        Rhapsody
  Score "Blank7"  ▶
  Stave ""        ▶
  System          ▶
  Block           ▶       Format
  Format          ▶   Create...
  View            ▶   Reconstruct ▶
  ----------------    Delete      ▶
  Go to           ▶   Print       ▶
  Play from       ▶
  Play options...
  ----------------
  Capture         ▶
  Transcribe...
```
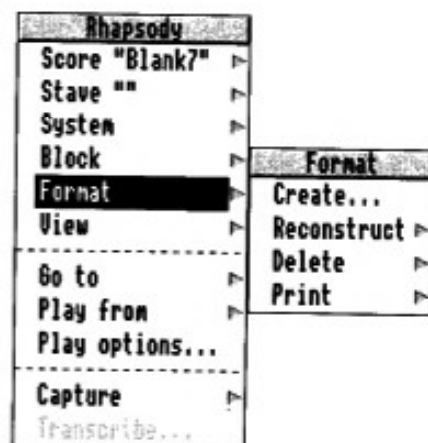
Format ▶ Create...

Opens a window allowing you to format the score, or a selection of staves from the score, over several pages. Several formats can be created and held in memory at once, and the formatted scores can be edited as normal in addition to being printed. Format details are also saved with the score. See page 124 for more details.

Format ▶ Reconstruct ▶

Leads to a menu of current formats. Choosing one leads to a window which allows you to change the page size and other details before reformatting it.

Format ▶ Delete ▶

Leads to a menu of current formats. Choosing one of these removes a previously-created format from memory.

Format ▶ Print ▶

Prints one of the formats currently held in memory, the equivalent of clicking Menu on the relevant format window and choosing Score ▶ Print. See page 135 for more details.

The View menu

```
        Rhapsody
  Score "Blank7"  ▶
  Stave ""        ▶
  System          ▶
  Block           ▶
  Format          ▶        View
  View            ▶   Format    ▶
  ----------------    Scale     ▶
  Go to           ▶   New view  ▶
  Play from       ▶
  Play options...
  ----------------
  Capture         ▶
```
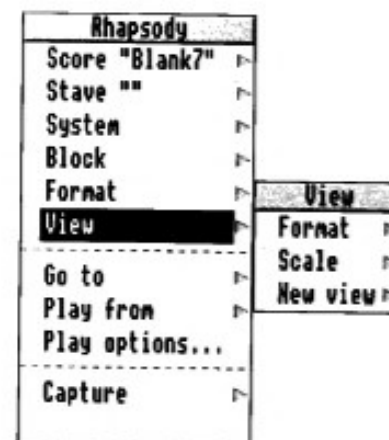
View ▶ Format ▶

Leads to a menu of current formats. Choosing one of these views that format in the current window. Full score: linear mode refers to the "unformatted" single-strip editing mode, which cannot be printed.

View ▶ Scale ▶

Leads to a window allowing the current editing window to be viewed at any scale.

Appendix A: Menus

View ▶ New view ▶

> Leads to a menu of current formats. Choosing one of these opens a new window with that format displayed.

Go to ▶

```
┌──────── Rhapsody ────────┐
│ Score "Blank7"       ▶    │
│ Stave ""             ▶    │
│ System               ▶    │
│ Block                ▶    │
│ Format               ▶    │
│ View                 ▶    │
├──────────────┬───── Go to ─────┐
│ Go to        ▶│ Start          │
│ Play from    ▶│ Cursor         │
│ Play options...│ Bar          ▶ │
├──────────────┤ Letter         ▶ │
│ Capture      ▶│ End            │
│ Transcribe...│                 │
└──────────────┴────────────────┘
```
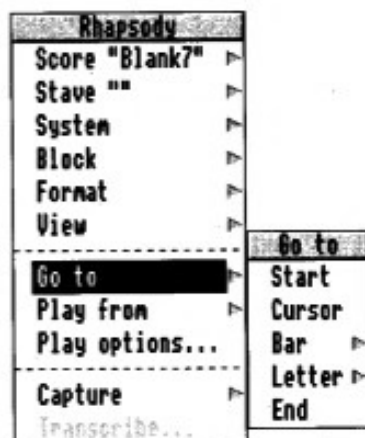
> This menu allows you to shift the view of the current score to a particular point in the piece. This can be expressed in the form of bar numbers or rehearsal letters.

Play from ▶

> This menu is similar to the one above and allows you to start playing from a particular place in the piece.

Play options ▶

> Opens a window allowing you to set various options which affect the way a score is played. See page 36.

Capture...

> Leads to a menu allowing you to capture music direct from a MIDI instrument. See page 95.

Transcribe...

> Opens a window which allows you to transcribe music captured from a MIDI instrument into a score. This item is only available when some music has been captured. See page 98.

Appendix B: Keyboard shortcuts

Miscellaneous shortcuts

TAB	Show main panel and switch to normal editing mode *or* toggle auto spacing
Shift TAB	Show main panel and switch to quick edit mode
Ctrl TAB	Show main panel and switch to drop edit mode
Ctrl	
Pge up	Shift symbols window left
Pge down	Shift symbols window right
P	Start or stop playing (from here)
Shift P	Start or stop playing (from cursor)
Ctrl P	Start or stop playing (from start)
Ctrl R	Start or stop recording
Ctrl '	Start/stop step capture mode (auto tails)
Ctrl [	Start/stop step capture mode (up tails)
Ctrl]	Start/stop step capture mode (down tails)
Escape	Stop playing and view bar being played
Print	Open print or format window as appropriate

Cursor movement

Cursor	
Up	Up a line
Down	Down a line
Left	Left one slot
Right	Right one slot

Shift Cursor-	
Up	Up one octave
Down	Down one octave
Left	Left one bar
Right	Right one bar

Ctrl Cursor-	
p	Up one stave
Down	Down one stave
Left	Beginning of score
Right	End of score

Ctrl Shift Cursor-	
Up	Up a line
Down	Down a line

Pge up	Up one octave
Pge down	Down one octave
Home	Up one stave
Copy/End	Down one stave

Editing operations

,<	Insert object before cursor
Space	Insert object at cursor
.>	Insert object after cursor
/?	Delete object at cursor
Delete	Delete object at cursor
Shift Delete	Delete all objects at cursor
Ctrl Shift Delete	Delete whole slot at cursor
Ctrl A	realign bar
Ctrl K	kern bar
Ctrl J	unkern bar
Ctrl C	copy block
Ctrl V	copy & insert block
Ctrl X	clear everything from block
Ctrl Z	remove block marker

Ctrl S	swap tail on note
Ctrl D	slur note
Ctrl F	force beam / remove force beam
Ctrl B	break beam/remove break beam
Ctrl G	alternative note
Ctrl H	cycle through note heads
Ctrl L	stemless note
Ctrl N	enharmonic change
Ctrl M	swap tie direction
Ctrl Q	join notes
Ctrl W	split note equally
Ctrl E	make equal
Ctrl R	make equal with rest
Ctrl T	make dotted rhythm
Ctrl Y	make syncopated rhythm
Ctrl U	make triplet rhythm
Ctrl I	make syncopated triplet rhythm

Symbols

F1	Hemidemisemiquaver
F2	Demisemiquaver
F3	Semiquaver
F4	Quaver
F5	Crotchet
F6	Minim
F7	Semibreve
F8	Breve

Shift F1	Hemidemisemiquaver rest
Shift F2	Demisemiquaver rest
Shift F3	Semiquaver rest
Shift F4	Quaver rest
Shift F5	Crotchet rest
Shift F6	Minim rest
Shift F7	Semibreve rest
Shift F8	Breve rest

Ctrl F1	Sharp
Ctrl F2	Flat
Ctrl F4	Natural
Ctrl F5	Double sharp
Ctrl F6	Double flat
Ctrl F7	Natural-sharp
Ctrl F8	Natural-flat
Shift S	Treble clef
Shift A	Alto clef
Shift T	Tenor clef
Shift B	Bass clef

F	F major (D minor)
C	C major (A minor)
G	G major (E minor)
D	D major (B minor)
A	A major (F# minor)
E	E major (C# minor)
B	B major (G# minor)

Shift U	Common time (4/4)
Shift I	Alla breve (2/2)
Shift O	Duple time (2/4)
Shift J	Compound time (3/4)
Shift K	Compound duple (6/8)

F9	Dot
Shift F9	Double dot
Ctrl F9	Triple dot

F10	Tie
Shift F10	Triplet

	Barline
1	1st time bar
2	2nd time bar
3	Rehearsal letter
4	Half barline
5	Double barline
6	End barline
7	Start repeat
8	End repeat
9	Double repeat
0	Blank stave

	Staccato
!	Spiccato
"	Tenuto
	Accent
	Stress
	Sforzando
	Fortepiano

Shift F	Phrase mark
Shift H	Hairpin
Shift L	Line

	Pedal start
	Pedal end
	Pedal stop/start

;	Acciaccatura
:	Appoggiatura

Ctrl Shift F1	ppp
Ctrl Shift F2	pp
Ctrl Shift F3	p
Ctrl Shift F4	mp
Ctrl Shift F5	mf
Ctrl Shift F6	f
Ctrl Shift F7	ff
Ctrl Shift F8	fff

Blank page

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