

# Prosound Help - Contents

[Getting Started](#)

[Editor Tools](#)

[Functions](#)

[Keyboard Shortcuts](#)

[Recording and Playing a Song](#)

[Song Viewer](#)

[Copyright](#)

# Functions

Auto Quantise

B.P.M.

Brush

Copy

Create

Cut

Cycle

Delete

Drum Editor

Fast Forward

Global

Hear Notes

Instrument Map

Locators

Metronome

Midi

Mouse Position

Move

Mute

Notepad

Open File

Paste

Pencil

Point and Drag

Preferences

Quantise

Quantise Single

Record Options

Record

Redo

Repeat

Resize

Rewind

Save File

Scissors

Select Region

SMPTE Time

Snap

Solo

Song Position

Song Time

Sync

Time Signature

Transpose

Undo

Zoom

# Song Viewer

Listed below are the various Song Viewer Pages:-

Arrange  
Block Edit Grid  
Drum Edit  
Event Display  
Key Edit  
List Edit  
Logical  
Notepad  
Master Track  
Mixdown  
Part Store  
Song Viewer Editor  
Status Bar

The Song Viewer is the large window dominating the majority of the screen. It displays all the Sequence information.

Song Viewer Pages can be opened in one of 2 ways; either by Left Clicking on one of the 13 Tab buttons down the left hand side of the screen, or Right Clicking. A Left Click will open the desired Page, whilst leaving all other Pages open as well. The Pages will be tiled so that if 3 Pages are open, each will occupy 1/3rd of the total space in the Song Viewer. If the Right Button is pressed, all other Pages will be shut down, and only the selected Page will be visible, occupying the entire Song Viewer.

Pages can also be resized individually. There must be at least 2 Pages open for this function to operate. Position the cursor just above the bottom of the Page you want to resize. (If the Page has a scroll bar, which most do, position the cursor just above the scroll bar.) The cursor will change shape to a small 2 way arrow. Left Click, and move the cursor up or down. When you release the mouse, the Page will be resized so that it's bottom is at the cursor position. All Pages beneath it will be resized in fractions. These Page settings can then be saved using the Song Viewer Editor.

## Auto Quantise



This function allows dynamic correction of Notes as they are recorded into the sequencer from an external source (typically a keyboard). The amount of auto correction is determined by the Quantise value at the top left hand corner of the screen. The following values can be set:-

<u>Value</u>	<u>Corresponding Accuracy</u>
1	Semibreve
2	Minim
4	Crotchet
8	Quaver
16	Semi quaver
32	Demi semi quaver
64	Semi demi semi quaver

Note:- If you record Parts in using the Auto Quantise facility then the Notes are stored, from the outset, in their quantised positions. This will mean that the imperfections cannot be recovered. If you want to separate the recording of the Events from the Quantise operation then record the Events in without Auto Quantise then Quantise them afterwards. This will make 2 distinct steps which can be individually undone.

## **B. P. M.**

Tempo changes (or B.P.M. Events) can be controlled extremely accurately. The B.P.M. Edit Box at the top left corner of the screen displays, and can be used to change, the B.P.M.value for the current Song Position. Changing this Edit Box value will not insert new B.P.M. values, it will update the last B.P.M.Event before the current Song Position.

The B.P.M. value at Song Position 000:01:000 cannot be deleted. This is the song`s default B.P.M.

The value in the B.P.M. edit box can be incremented in either whole units or thousandths.

For Information on how to input new B.P.M. Events see Master Track.

## Brush



The Brush is one of the most powerful of the editing options. Following is a list of the operations which will be performed in any particular Song Viewer window. For example, the title `Arrange Left Click` describes what will happen if the brush is used in the Arrange Page.

### Arrange Left Click

Creates a New Part within the Start and End Locators if no Part exists already. If a Part does already exist the new Part will be truncated to fit the available space. If you Click on a Part with the Brush no operation will be performed. If you Click outside the Locator range no operation will be performed. Click and Drag operates on a vertical basis for multiple creation of Parts within the Locator range, (subject to the above exceptions).

### Arrange Right Click

Deletes a Part. Click and Drag allows the deletion of more than one Part.

### Part Store Right Click

Deletes a Part in the Part Store. If other Parts exist on the same line in the Store to the right of the one deleted they will be shuffled to the left, closing the gap left by the deleted Part.

### Drum / Key Editor Left Click

Creates a new note at the cursor position. Click and Drag allows the creation of several notes at one time. When the Click and Drag facility is used the inputted Notes will all have the same Key Value. This is useful, for example, when inputting a high hat drum line with a regular pattern to it, rather than having to individually click for each new note. The length of the note will be determined by the Quantise value, (i.e. the more accurate the Quantise value the smaller the note).

### Drum / Key Editor Right Click

Deletes notes at the cursor position. Click and Drag allows multiple deletions to be performed in one operation

### Event Display Editor Left Click

Creates new Events of types other than Notes. For instance, the brush could be used to draw in a Pitch Bend curve, or a Midi Volume slope, etc The Brush cannot be used to input Notes because it is only concerned with Velocity rather than Pitch or Length. Prosound would not know which Pitch to insert the Note at. It can, however, insert Poly Pressure changes, which then have to be mapped to the required Note in the List Editor.

### Event Editor Right Click

Deletes Events at the cursor position. Notes can be deleted from the Event Editor because the

restrictions referred to if the Left Click description above do not apply to deletion. Click and Drag serves to delete multiple Events in one operation.

## Master Track Left Click

In the Time Signature strip at the top of the Master Track Page Left Clicking with the Brush will insert a new Time Signature at the nearest Bar. If a Time Signature Change already occurs at the relevant Bar the old value will be removed and a new value inserted in it's place. The new Time Signature will always default to 4/4 and must be edited by using the Point and Drag Tool.

In the bottom section of the Master Track Page, (i.e. the B.P.M. area), the Brush will insert new B.P.M. events at the mouse position. Click and Drag can be used to insert B.P.M. slopes.

## Master Track Right Click

In the Time Signature strip the Brush will delete the last Time Signature change encountered, (i.e. to the left of the mouse position). Click and Drag does not operate in the Time Signature strip.

In the B.P.M. area the Brush deletes any B.P.M. Event at the mouse position. Click and Drag can be used to delete several B.P.M. Events. There must always be one B.P.M. Event currently selected, and if the selected B.P.M. Event is deleted selection is transferred to the previous B.P.M. Event. The B.P.M. Event at Song Position 000:01:000 cannot be deleted.

## Copy



Copy places the contents of a Part into a Buffer which can then be Pasted back out into the appropriate Song Viewer Page. Either whole Parts or collections of Events can be copied to Prosound's Clipboard. Which operation is performed depends upon which Song Viewer Page has Focus. If, for example, Focus is set to the Arrange Page, pressing Copy will place the contents of a whole Part, or collection of Parts, onto the clipboard. Subsequent calls to the Paste function will insert new Parts, with all their Events, into the Arrange Page.

Only three of the Event Editors can make use of the Clipboard; the Key Editor, Drum Editor, and Event Editor. In each of these cases Events can be copied from one of the Editors and Pasted in another. For example, it is possible to copy Notes from the Event Display Page to the Clipboard, then set the Focus to the Key Editor and Paste the Notes into that Page.

Copy only operates on the currently selected Parts / Events. If there are no Parts / Events selected when the Copy button is pressed you will be informed that no operation has been performed and the Clipboard has not therefore been correctly filled.

When information is transferred to the Clipboard using Copy, the original source information will not be affected at all. Alternatively, you can use Cut, which does delete the source information.



## Create Track



This function Creates a new Track with default settings. The new Track will always, by default, be a Key Track, and will, if possible, use an unused Midi Channel. A maximum of 253 Tracks can be created. Although Prosound is a 256 Track sequencer, the last 3 Tracks are used internally and may not be Edited.

## Cut



Cut places the contents of a Part into a Buffer which can then be Pasted back out into the appropriate Song Viewer Page. Either whole Parts or collections of Events can be Cut to Prosound's Clipboard. Which operation is performed depends upon which Song Viewer Page has Focus. If, for example, Focus is set to the Arrange Page, pressing Cut will place the contents of a whole Part, or collection of Parts, onto the Clipboard. Subsequent calls to the Paste function will insert new Parts, with all their Events, into the Arrange Page.

Only three of the Event Editors can make use of the Clipboard; the Key Editor, Drum Editor, and Event Editor. In each of these cases Events can be copied from one of the Editors and Pasted in another. For example, it is possible to Cut Notes from the Event Editor Page to the Clipboard, then set the Focus to the Key Editor and Paste the Notes into that Page.

Cut only operates on the currently selected Parts / Events. If there are no Parts / Events selected when the Cut button is pressed you will be informed that no operation has been performed and the Clipboard has not therefore been correctly filled.

When information is transferred to the Clipboard using Cut, the original source information will be deleted. Alternatively, you can use Copy, which does not affect the source information in any way.

## Cycle



This function allows a section of the Song to be looped, for Editing purposes. When the Display Bulb is green, Cycle is activated. For Cycle to operate properly the Start Locator must be positioned before the End Locator. This is because, when the Song Marker reaches the End Locator Prosound scans backwards to find the Start Locator and thus allows the Song to jump backwards and repeat. Cycle is used almost exclusively when Recording, to add Notes in on each loop.

Refer also to the Record Mode Options for different ways Notes can be input.

## Delete



The Delete Dialog Box contains all the functions for deleting information from your sequence. Listed below are the various operations which can be performed here.

### Delete Selected Track

Deletes the currently selected Track. All Parts and Events on the Track are also deleted.

### Delete Selected Parts

Deletes the currently selected Parts. If any Parts are deleted which have Child Parts attached, the Child Parts are 'Matured' into Parents themselves. Parts must be selected in the Arrange Page, rather than the Part Store, for this operation to succeed.

### Delete Selected Notes

Deletes all selected Notes, but not any other type of Event information.

### Delete Doubles

Removes any instances where 2 Notes occur at the same Pitch at the same time. This can happen when, for example, you are Recording whilst in Cycle mode, and Play the same Note at the beginning of the Bar on successive loops. Because there are 2 Notes being Played at the same time this may cause undesirable Midi conflicts, causing the keyboard to 'fluff' the Note.

### Delete Continuous Data (Basic Dialog Box)

Deletes all information in all selected Parts other than Notes. It therefore includes

- After Touch Events
- Pitch Bend Events
- Poly Pressure Events
- Controller Events

### Delete Continuous Data (Advanced Dialog Box)

Deletes all Events of the selected types from all active Parts. Events which can be individually selected for deletion are:-

- After Touch Events
- Pitch Bend Events
- Poly Pressure Events
- Controller Events

Three different Control types can be selected for deletion simultaneously. If you want to delete all Control Events use the Basic Dialog Box Delete Continuous Data Button. Any Check boxes which are selected will determine which Events are deleted. For example, if only Pitch Bend

was selected and you press this button, only Pitch Bend Events in the selected Parts will be deleted; all other Events will remain unaffected.

## Reduce Continuous Data (Advanced Dialog Box)

Instead of deleting all Continuous Data as described above you may wish simply to ease Midi traffic flow by taking out some of the Pitch Bend Events of After Touch Events, (or any other kind of Data) which are clogging the system up. By setting the percentage by which you want reduction to occur and selecting Events of the desired type, you can logically filter out Events. The way Reduce works is to remove every other n<sup>th</sup> event it encounters of the correct type, starting at the beginning of the selected Part and working through to the end. So, if the reduction value was set to 25%, every 4th Event of that type would be deleted. Similarly, if the rate is set to 75%, 3/4 of all Events will be deleted.

## Set Controller (Advanced Dialog Box)

See [Set Controller](#) help topic

## Shortcut Operates

See [Shortcut Operates](#) help topic

## Dialog Display

See [Dialog Display](#) help topic

## Fast Forward



This function accelerates the Song Marker forwards through the Song, in exactly the same way as fast forward on a tape machine or video recorder operates. If Fast Forward is pressed whilst in Record mode, recording will be stopped and the Song will enter Play mode.

## Save File

### Save Sequence

A Dialog Box will be opened which will allow selection of a File Name under which to save the current Sequence. Files are saved with a .psq extension. To save the Sequence immediately without having to select a file name, use the Save Sequence Shortcut.

### Save Drum Map

Saves any changes to the Drum Map. Drum Map files are saved with a .psd file extension.

### Save Midi Format File

Saves the current Sequence in .mid format. Midi Format files are compatible throughout most sequencers and keyboards, and allow the Sequence to be exported to an external processor.

## Global



Listed below are the various options within the Global Dialog Box.

### Global Part Cut

This function deletes all Parts within the Locators and moves all Parts to the right of the End Locator backwards by the distance between the Locators. Essentially, it completely removes all trace of the information within the Locator range.

### Global Part Insert

This function moves all Parts to the right of the Start Locator forwards by the distance between the Start Locator and the End Locator. This is used when you want to insert a space in the Song in order to include a new section.

### Global Part Split

This function cuts all Parts at both the Start and End Locators. It is often used before Parts within the Locator range are deleted or Edited as a block.

### Reset All Parameters

This function performs a global reset on the Sequence. All Notes are turned off, and the Song Marker is returned to zero.

### Select All Parts

This function deselects all Events and then selects every Part in the sequence. It is useful for performing edit operations on all Events at once throughout the entire Song. (Remember that if you perform an edit operation on Parts where no Notes are selected, all Notes will be affected. This saves you having to explicitly select all Notes beforehand.)

### Select All Notes On Track

This function selects all Notes, and Parts, on a Track prior to an Edit operation being performed.

### Select All Notes Within Locators

This function selects all Notes, and Parts, within the Locators prior to an Edit operation being performed.

### Select Notes In Active Parts

This function does what it says - it is used prior to performing global edit operations on Notes. Remember that many edit operations will occur if all Notes are Deselected as well as Selected. However, if, for example, you wanted to shift all the Notes to the right using the Move Tool, the Notes would need to be explicitly selected first.



## Mature Selected Parts

This function converts all selected Child Parts into Parent Parts.

## Shortcut Operates

See Shortcut Operates help topic

## Dialog Display

See Dialog Display help topic

## Hear Notes



This Tool operates in both the Key Editor and Drum Editor Pages. Left Clicking on any Note will play the Note.

If you Left Click and Drag in any direction, you will hear any Notes the cursor moves over..

## Locators

The Start and End Locator determine which points the Sequence will loop around when in Cycle mode. For example, if you are recording a new Part at Bar 24, and the Part is 8 Bars in length, you would position the Start Locator at Bar 24 and the End Locator at Bar 32. By activating Cycle and pressing Record you will see the Song Marker move forwards from Bar 24 until it reaches Bar 32, then jump back to Bar 24 to allow Overdubbing of Notes.

There is an option in the Record Mode Dialog Box which allows a flag to be set determining whether the Song Marker will automatically jump to the Left Locator whenever Record is pressed. The function is called Record From Start Loc.

If the End Locator is positioned at or before the Start Locator, the Locators will be ignored and Cycle will not operate.

The Locators are moved in one of 2 ways - either by clicking in the top Locator strip in the Arrange, Key Editor, or Drum Editor Pages, or by directly inputting a value in the Edit Box at the top of the screen. The Locator strip in each of the 3 Pages mentioned above is positioned at the top of each Page, and contains numbers representing the Bar values throughout the Sequence. The nearest Bar position is displayed in the white rectangle which marks the Locators, preceded by `S` for the Start Locator and `E` for the End Locator. The Edit Box at the top of the screen allows you to determine whether presses of the up and down arrows to the right of the Box increment the Locators in Bars or Beats. This is done by Left Clicking in the Bar element of the number for Bars, or the Beat (middle) element for incrementing in Beats.

The Locators cannot be positioned at Song Positions less than a Beat. Furthermore, if the Snap value (extreme top left hand corner of the screen) is on, the Locators can only move to the nearest Bar. This can be overridden by directly typing in a number in the Edit Box, which will always allow movement accurate to the nearest Beat.

## Metronome



The Metronome produces Beeps or Clicks in order to allow you to keep in time with the Song when you are Recording Notes. The number of Beeps you hear in any one Bar will be determined by the current Time Signature. For example, if the Song is in 4/4 you will hear a Metronome Beep 4 times every Bar. If you are in 4/8 you will still hear 4 Beeps every Bar, because the Metronome is counting only the Beats, but the Beeps will be twice as fast. If you are in 7/8 you will hear 7 Beeps every Bar.

The Basic Box allows the Metronome to be activated individually for Record and Playback.

The **Advanced Box** allows more detailed manipulation of the Metronome.

### Use Internal Speaker

This Check Box determines whether the computer's internal Click will be sounded. No external equipment is used to activate this sound, and it defaults to 'On' for basic Metronome use.

### Use Midi Notes

This Box determines whether the Metronome will send Beeps to an external device such as a keyboard. The options below determine what the Metronome will sound like.

#### Accented Note

The accented Note is the first Note of the Bar. It is typically set to a higher tone than the unaccented Notes in order to guide you to the beginning of each Bar.

#### Accented Velocity

This function determines how loud the Accented Metronome Note will be. Typically the Accented Velocity is set slightly louder than the Unaccented Notes to provide an emphasis to the beginning of each Bar.

#### Unaccented Note

Determines which Pitch the Unaccented Metronome Notes will be played on. These Notes are typically set to a lower Pitch than the Accented Notes.

#### Unaccented Velocity

Determines how loud the Unaccented Metronome Notes will be.

#### Midi Channel

This setting determines which Midi Channel the Notes will be output on. Only a Midi Channel which has been correctly set up on the external device will receive any Metronome Notes.



## Mouse Position

The Mouse Position is displayed for each of the following Pages in the Song Viewer:-

Arrange  
Part Store  
Drum Editor  
Key Editor  
Event Editor  
Master Track

It is corrected (when the Snap facility is activated) to the nearest Snap value. In the Arrange Page the Mouse Position will be Snapped to the nearest Bar when Snap is `On`, and to the nearest Beat when Snap is `Off`. In all the Event Editors the Mouse Position will be Snapped to the nearest Snap value when Snap is `On`, and not adjusted at all when Snap is `Off`.

The Mouse Position indicator is used to assist insertion of Events, Locator Bars, etc. In the Song Viewer. It is always visible on the Main Screen at the extreme top right hand corner, but it is also visible in the Status Bar if open.

## Move



The Move Tool allows Parts and Events to be moved around the Song Viewer in various ways. Following is a list of the operations which will be performed in any particular Song Viewer window. For example, the title `Arrange Left Click` describes what will happen if the Move Tool is used in the Arrange Page.

### Arrange Left Click

In this Page, any selected Parts will be moved in a North South East West direction depending on where, in relation to the Parts, the mouse is when the button is clicked. For example, if you have one Part selected in the middle of the Arrange Page, and you Left Click underneath the Part, the Part will be shunted upwards onto the Track above. If there is already a Part on the destination Track, you will be asked whether you want the Parts to be merged together. Remember that Parts are not allowed to overlap. Any Parts moved over each other will be merged, or the operation cancelled. If you move to the left of the Part and Left Click again, the Part will be moved to the right by a distance determined by the Snap Value. When the Snap facility is `On` the Part will move forwards one Bar. When Snap is `Off` the Parts will move forwards one Beat. Parts cannot be moved above ordinal Track 0, nor beyond the bottom Track, nor beyond Song Position 000:01:000. If you Left Click to the left and above the selected Part(s) no operation will be performed since you cannot move in a horizontal direction.

Click and Drag does not operate on this facility. Simply Left Click in the Arrange Page to move the Parts as desired. If there are no Parts selected, this Tool will not perform any operation.

### Arrange Right Click

This button allows a Focus Rectangle to be drawn around Parts in the Arrange Page which will select the Parts within the Rectangle when the button is released. For example, Right Click to the left and above of a collection of Parts in the Arrange Page and drag to the right and down. Then release the button. All Parts either partly or wholly within the rectangle at the moment of release will be selected. All Parts are deselected at the moment the button is pressed prior to the rectangle being drawn.

This button can be used to select just one Part by Right Clicking on the Part and releasing again. The Part can then be moved using the Left Click facility described above.

### Part Store Left Click

This Tool allows Parts to be moved around in the Part Store by Dragging them to their destination. If there are no Parts selected when the button is pressed, the Part clicked on will be selected. If there are Parts selected but the Part clicked on is not one of them, the other Parts will be deselected and the Part clicked on will be selected. If there are one or more Parts selected and the Part clicked on is one of the selected Parts, then all the selected Parts can be moved.

Remember that in the Part Store, all Parts on any one Line will be automatically shunted to the left to remove any spaces between them when a move operation is performed. Conversely, if a Part is moved onto a Line already containing other Parts, the moved Part will be inserted into

the Line and all Parts to it's right will be shunted to the right. The Parts are moved according to the leftmost edge of the Selected Parts.

### Key Editor Left Click

This function operates in a very similar way to that described in the Arrange Left Click section above. It allows selected Events to be moved in a 4 Way direction by Clicking to the Left, Right, Above or Below. As in the Arrange Page, Notes will not move in a horizontal direction. If there are no Events selected, this Tool will not perform any operation.

### Key Editor Right Click

This function also operates in a similar fashion to the Arrange Tool. It allows a rectangle to be drawn around Notes which will be selected when the button is released. It also allows just one Note to be selected by clicking on it. The Note can then be moved by Left Clicking.



## Mute



This Tool operates only in the Arrange Page. It allows individual Parts to be Muted. This means that no Notes or other Events in the Part will be played. The Notes (/Events) do not disappear, they are just not played.

Any Muted Parts can be un-Muted by simply clicking on them again.

Groups of Parts can be Muted or un-Muted by Clicking and Dragging the mouse. Any Parts which lie in the selected rectangle when the button is released will be affected. With the Left button, Parts lying in the selected range will be `flipped` in status. Muted Parts will be un-Muted, and vice versa. The Right button will always Mute Parts in the selected range.

## Notepad



The Notepad is a 2k text file in which information can be typed. All text in the Notepad is saved by default with the Sequence and will be recalled when the Song File is re-opened. There are no restrictions as to what information can be stored in the Notepad.

## Open File



This Dialog Box contains all the facilities for initialising and opening Files. Listed below are the various options.

### New Sequence

This button deletes all Song information, including Tracks, Parts and Events, and Creates 16 new, empty Tracks with their default values. The Notepad is cleared, and the default Drum Map is loaded in.

### Open Sequence

A Common Dialog Box is opened, allowing selection of a previously saved Sequence (.psq) File. Note that Prosound has a Definition File called Prosound.psq which contains default settings for a new Sequence. This file can be amended so that each time you set up a new Sequence there will be a default set up from which to start. A confirmation box will appear if you attempt to overwrite this File.

### New Drum Map

A new, 96 note Drum Map will be initialised for subsequent editing. Again, Prosound has a default (.psd) File which can be amended and which stores basic settings.

### Open Drum Map

A Common Dialog Box appears, allowing a saved Drum Map File to be recalled. It is therefore possible to set up different Drum Maps for various keyboards or combinations of keyboards.

### Open Midi Format File

Midi Format Files are special Sequence Files which are compatible with most Midi Sequencers. A .psq File could therefore be saved in this format allowing the Sequence to be exported to another Sequencing program. Similarly, Sequences written on other software can be saved as .mid Files and loaded into Prosound.

### Open Last Sequence On Start Up

This Combo Box allows you to decide whether Prosound will automatically recall the last Sequence you were working on when the program is first run. The name of the last Sequence will actually be stored in Prosound.psq, so this facility will only operate if the Sequence you want to recall is in the same directory as the desired File.

## Paste



This function inserts the contents of Prosound's Clipboard into the Song Viewer Page with Focus. The Paste function only operates in 4 of the Song Viewer Pages; , Key Editor, Drum Editor, and Event Editor. The Clipboard will, however, group these Pages into 2 general categories, Parts (i.e. Arrange Page), and Events.

This means that a Part can be Cut or Copied onto the Clipboard, and still Pasted back out even after Events have been Cut or Copied in from, for example, the Key Editor. Any number of Parts or Events can be placed in the Clipboard, and they will be pasted back out retaining their relative Track or Pitch values. For example, if you were to Cut Parts to the Clipboard from Tracks 1, 2 and 3, then subsequently Paste them back into the Arrange Page, if you clicked on Track 5 the Parts would be placed on Tracks 5, 6 and 7. If you Cut events to the clipboard containing C, C#, E and G# notes then the Pasted block might be inserted onto D, D#, F# and A# (i.e. effectively Transposing the Notes 2 semitones).

You will also note that, when the Paste button is pressed, and the Song Viewer Page with Focus is the Arrange Page, the cursor will change shape and will be Clipped to (i.e. it cannot move outside) the Arrange Page. If the Arrange Page is not open, this function will fail, and you will need to open the Arrange Page before Pasting can be done. Similar conditions apply to the Event Editors.

The Parts / Events will be inputted according to the cursor position at the time of Left Clicking. The top left hand corner of the rectangle containing the Parts / Events to be Pasted will track the cursor as it moves around the Page.

## Pencil



This function performs various operations on different Song Viewer Pages. Listed below is a description of each function in relation to its corresponding Song Viewer Page.

### Arrange Left Click

This function allows a blank, variable length Part to be inserted anywhere in the Arrange Page. This is achieved by Left Clicking in a space on the Arrange Page, (i.e. a Track which is not already occupied by a Part), and Dragging to the right. When the button is released, a new Part will be created between the start and end positions of your operation. If any Parts exist within this range then you will be asked whether you want to truncate the Part to fit in the largest available space on the Track.

A single Left Click and immediate `button up` will result in a Part of either 1 Bar or 1 Beat being inserted, depending on your current Snap value.

If the Snap setting is `On`, the new Part will be adjusted to begin and end at the nearest Bar. If the Snap setting is `Off`, the adjustment will be to the nearest Beat.

### Arrange Right Click

Right Clicking deletes sections of Parts. For example, if you had an 8 Bar Part and Right Clicked at Bar 4, the result would be 2 new Parts, one 3 Bars long, the other 4 Bars long, and a one Bar space in between. If you were to turn the Snap setting `Off` the amount deleted by a Right Click would be one Beat.

Click and Drag operates to allow larger sections of Parts to be deleted. If, taking the example above, you were to Right Click at Bar 4 and Drag across to Bar 7, then release, the space between the 2 new Parts would be larger (3 Bars in this case).

If you Drag beyond the beginning or end of a Part then everything upto the beginning or end will be deleted.

This function does not allow more than one Part to be edited at any one time.

### Key Editor Left Click

This function allows Notes of variable length be inserted anywhere in the Key Editor Page. The operation is similar to that described for the Arrange Page above; Left Click at the point you want the Note to begin, and Drag to the Right. Release the button to insert the Note, (with the length being determined by where you release the button).

A single Left Click and immediate `button up` will insert a note of variable length depending on the current Snap value. For example, when Snap is set to 16, this operation will insert a Note equivalent to a semi quaver in length. The beginning of the Note will also be Snapped to the nearest Snap position.

### Key Editor Right Click

This function is similar to the Arrange operation described above. It deletes sections out of the middle of Notes.

Click and Drag allows deletion of larger sections out of Notes by Clicking and Dragging to either the left or right. When the Right button is released the whole of the Note inside the range will be removed, creating (if appropriate) 2 new Notes. If the range takes you beyond the beginning or end of the Note the whole of the Note in that range will be removed. Similarly, if you Right Click to the left of a Note then Drag across so the entire Note is inside the Drag range, the Note will disappear completely.

## Event Editor Left Click

This function operates in a different way to the 2 Pages described above. It allows Event Bars that already exist to be resized. It does not provide for creation of Events at all. (This is the job of the Brush.)

By Left Clicking and Dragging, Velocity Bars (for Notes), or Pitch Values (for Pitch Bend Events), etc, can be changed up or down. This allows freehand curves to be drawn in, affecting any type of Event Data you desire. For example, it would be possible to insert a large block of Pitch Bend data (from either the keyboard or the screen) then use the Pencil to `reshape` them into a smooth up and down curve, thus emulating a perfect Pitch Bend. (This takes some practice but is ultimately extremely accurate).

Single Events can be Edited by Left Clicking and Releasing without performing a Drag. The Click must be on the Event in order for this function to operate.

## Event Editor Right Click

This function, like its left button counterpart, operates differently to the Arrange and Key Editor Pages. It allows a straight line to be drawn across the Event Editor by Clicking and Dragging. When the Right button is released, all the Events of the selected type will be resized so that they fit underneath the line you have drawn. This function might be used to draw in a velocity slope (fade in / out).

## Master Track. Left Click

This function operates in an identical manner to the Event Editor operation described above, (but only in the B.P.M. area). It allows B.P.M. events to be resized, either individually or using Click and Drag. In other words, places in the song where Tempo Changes occur can be edited just as flexibly as any other kind of Event.

## Master Track Right Click

This function also operates in the same manner as the Event Editor description above, i.e. it allows straight slopes to be drawn in for smooth speed ups or slow downs in the .B.P.M. section of the Page.

## Point + Drag



This is by far the most useful and important Tool in the Tool Box. Listed below are all the functions accessible with this Tool, relative to each Song Viewer Page.

### Arrange Left Click

This function performs several tasks. If you were to Click in an area of the Arrange Page not occupied by a Part, all currently selected Parts will be deselected. If you Click in an unselected Part, Prosound will select this Part for Editing, whilst also deselecting any other currently selected Parts. If, however, you Click on a Part which has already been selected, then the Pointer's Drag function becomes engaged. In this case, all currently selected Parts will remain highlighted. They can then be picked up (whilst still holding the Left button down), and a rectangle will appear representing the outermost limits of the selected Parts. This rectangle can be moved around the Arrange Page freely, and, when the Left button is released, the selected Parts will all be moved to their new destination.

For example, suppose you had 3 Parts spread across Tracks 1, 2 and 3. They are all selected. Click on any of the selected Parts and Drag the cursor down to the next Track. Now release the Left button. You will see the Tracks move down to 2, 3 and 4.

If you Click in a space on the Arrange Page (i.e. not occupied by a Part), and Drag, you will see a rectangle appear from your Original cursor point to your Current cursor point. When the button is released, any Parts lying inside or intersecting the rectangle will be selected.

### Arrange Right Click

This function toggles a Part selection on or off. Right Click on the Part and see it turn black (selected) or blue / green (unselected). This allows powerful manipulation of the selection of Parts in the Arrange Page.

### Block Editor Left Click

This function will depend on the information currently selected in the Part Store. If whole Parts are selected in the Store, a Left Click of the Pointer in the Block Edit Grid will insert a section of a Child Part from the Store into the Arrange Page.

Suppose you have selected a 4 Bar Part in the Part Store, (i.e. it is coloured red). The Block Edit Grid will have major divisions (white lines) painted in it every 4 Bars, and sub divisions (grey lines) every Bar or Beat, depending on your Snap value. We will say that Snap is `On` and the grey lines will therefore be drawn every Bar. Left Click in an empty space in the Block Edit Grid and see a 1 Bar Part appear. The Bar will be green, telling you that it is a Child Part. The information that single Bar represents is a section of the Part in the Store which is relative to the beginning of the Part. This may be a difficult concept to grasp, but delivers extremely powerful results. In the example begun above, suppose you clicked in the second Bar of a 4 Bar Block in the Block Edit Grid. The Child Part created in the Arrange Page will represent the second Bar of information in the Store. This would be true even if you clicked in Bar 6, or Bar 10, or Bar 14, etc.

The main benefit of inputting data in this way is that, using Click and Drag, you can draw Parts

in dynamically, Bar by Bar, (or Beat by Beat), based on a fixed source of information held in the Part Store.

The other way of Pasting Parts from the Part Store to the Arrange Page is by using the second Part selection feature of the Part Store. This is where bits of Parts are selected in the Store, using the Right Point and Drag button.

Let's say you have the same 4 Bar Part in the Part Store, and it is a Kick Drum Part. You may wish to Paste a whole string of Bars into the Arrange Page, using just the last Bar of the Part which contains a drum roll. By selecting the last Bar of the Part in the Part Store the Block Edit Grid will update so that main (white) dividing lines are drawn every single Bar. Now, by Left Clicking in the Block Edit Grid in any of these divisions a new Child Part will be created, containing only the drum roll. The first 3 Bars of the Part in the Store have been completely disregarded.

If you click on a Block that is already occupied by a Child Part, that Block will be removed. The whole Part will not be removed - only the section that you Click on. If you Click and Drag over a Child Part, single Bars (or Beats) will be removed one by one as you move across the Part.

## Block Editor Right Click

This function performs exactly the same operation as when the Block Edit Grid is turned off and the Arrange Page is in `Normal` mode. (i.e. see **Arrange Right Click** above).

## Part Store Left Click

This function allows selection of one or more Parts in the Part Store using the Click and Drag facility. If, for example, you had 4 Parts on the first line in the Store, each 8 Bars long, you could Left Click on any of the Parts and release to select it. If you Clicked on the first Part and Dragged the cursor across to the last Part, all 4 Parts would be selected. In the latter case, this would mean that the main Pasting divisions in the Block Edit Page would be drawn every 32 (i.e. 4\*8) Bars, and there would be 32 sub divisions (grey lines) to represent each individual Part. (If the Snap was `Off` these sub divisions would be drawn at every Beat.)

The Parts in the Part Store cannot be moved using the Pointer. You must the Move Tool to do this.

## Part Store Right Click

This function, like it's Left Click counterpart, selects Parts in the Part Store. The important difference, however, is that using the Right button allows bits of Parts to be selected.

Suppose you had a 4 Bar Part in the Part Store. If you wanted to select just the last Bar, you would Right Click at Bar 3 and Drag across to Bar 4. When you release, the last Bit of the Part will turn green, indicating that the `Bit Part` facility has been engaged. Now, when you Paste Parts into the Block Edit Grid, they will each contain only the last Bar of the Part you have selected, rather than the entire 4 Bars.

More than one Part can be included in this operation - the green selector Bar will span the whole Store line if you so wish.



## Drum Editor Left Click

This function allows selection of single Drum Notes in the Drum Editor. If you click on a Note which is not currently selected, all selected Notes will be deselected, and the Note you have Clicked on will be selected. If you then Drag, the Note can be moved freely about the Drum Editor. If you Click on a selected Note, then that Note and any other selected Notes on the Drum Line can be moved about freely.

## Drum Editor Right Click

This function allows more than one Drum Note to be selected. This is achieved by Right Clicking and Dragging across the desired Notes. When you release the button, all Notes within the Drag range will be selected. It would then be possible to pick the selected Notes up using the Left button and Drag them to a new destination.

## Key Editor Left Click

This function enables selection of one or more Notes in the Key Editor. It operates in a similar fashion to the Arrange Page. Clicking on an unselected Note will deselect all selected Notes and select the Note you have Clicked on. This Note can then be moved around freely. Clicking on a selected Note will allow that Note, and any other selected Notes, to be moved. Clicking in a space on the Editor and Dragging with the cursor will draw a rectangle which will select all Notes it encompasses when the button is released.

## Key Editor Right Click

This function allows selection of a particular Note to be toggled on / off.

## Event Editor Left Click

This function is used to select one or more Events in the Event Editor. There is no vertical factor in the Event selection, since all Events are displayed on the same Bar Graph, so Clicking and Dragging with this button will draw a white rectangle which encompasses all Events of the selected type between the Origin and the Current position. When the button is released, all Events in that range will be selected.

## Master Track Left Click

This function serves two purposes in the Master Track Page; one for Time Signatures and one for B.P.M. values.

In the Time Signature strip across the top of this Page are displayed white boxes with values in them representing the Time Signature Numerator and Denominator. Clicking in this strip will open the Value Edit Box with either the Numerator or Denominator in it. The Time Signature can be edited by changing this value and pressing 'Update'.

In the B.P.M. Window, Left Clicking will select a B.P.M. for Editing purposes. Rather than utilising the Value Edit Box, the B.P.M. value is displayed permanently in the Master Track Page and the

value in this Box will be determined by the currently selected B.P.M. Event. Only one (and always one) B.P.M. Event is ever selected at any one time.

## Preferences



This Dialog Box contains miscellaneous system settings and controls. Listed below is a description of each item.

### Undo Buffer

This Group contains an Edit Box and a Button. The Edit Box allows a maximum size, in bytes, of Prosound's Undo buffer. The larger this value is set to, the more Edit functions can be stepped back through. The Button empties the Undo Buffer of all it's contents. This will mean, of course, that Redo will also be initialised.

### Floating Help On

`Floating Help` is the yellow Description Box which appears whenever the cursor is positioned over a Function button on the Main Screen. The Check Box determines whether or not the Box is displayed.

### Track Height

This Edit Box determines the height, on a scale of 1 - 7 of the Track Strips in the Arrange Page and Part Store. 1 is the smallest height setting.

### Key Height

This Edit Box determines the height, on a scale of 1 - 5 of the Track Strips in the Key Editor and Drum Editor Pages.

### Default Velocity

This Edit Box displays the Velocity (i.e. how hard the Note is `hit` on the keyboard) which will be automatically assigned to a Note when input on the following Editors

Key Editor  
Drum Editor  
Event Editor

### Default Length

This Edit Box displays the default length for Notes inputted to the Drum Editor. Note that the Drum Editor also has individually assignable length settings for each Note. Lengths are measured in Ticks, (there are 384 Ticks to one Beat). A 96 Tick length, therefore, would represent a semi quaver in Score terms.

### Default Note

This Edit Box displays the default Note at which Poly Pressure Events will be inputted in the

Event Editor.

## Timer Interrupt Interval

This value determines how often Prosound's internal Interrupt will take control of your computer and update any Events being played at that time. By default, this value is set to 3 milliseconds, and should cause no problems at all. If you have a fast machine you may be able to set the Interrupt Interval to a faster setting, (the quickest being 1 millisecond).

This value should have little or no affect on how well the sequence plays. If you have a very fast sequence, however, with many Notes being played at once, (and perhaps some vigorous Pitch Bend activity too), setting a faster Interrupt time will possibly make the sequence sound sharper.

Be careful with this setting. If your computer is not very fast, setting the Interrupt to 1 millisecond may make it impossible for you to regain control of your machine, because Prosound will be making absolutely sure Every Note is played at exactly the right time, at the cost of every other function in your computer. Don't be alarmed if your system does hang - simply reboot your machine and choose a lower Interval setting before you press Play again.

## Display Options

See Dialog Display help topic

## Quantise



Quantise is probably the single most important Editing facility on any Sequencer. It allows human imperfections to be corrected to a `perfect` position. The heavier the Quantise value (i.e. closer toward the maximum of 1 Bar), the more the Notes will be shunted to the left or right when the Note On button is pressed. Quantise can also be used to `smooth` any other Event characteristic. (It may be helpful to think of the term `smoothing` whenever considering Quantise operations). For example, it can be used to bring Note Velocities towards a certain value (say 100), or it can be used to make a Pitch Bend curve less dramatic by bringing the amount of Pitch on each Event closer to the centre value of 8192.

The way the Basic and Advanced Quantise Dialog Boxes operate is quite, different so each will be examined independently.

### Basic Quantise Dialog Box

#### Note On Quantise

This button Quantises the Start Position of any selected Notes. If no Notes are selected, all the Notes in any selected Parts will be Quantised. When musicians refer to `Quantise` they are usually referring to this function.

The amount of Quantisation which will be applied to any selected Notes is determined by an Edit Box at the top right hand corner of the Dialog Box, which number is taken from the Main Screen`s Quantise value when the Dialog Box is opened. In other words, if your current Quantise value is 16 when you enter this Dialog Box then the number 16 will appear in the internal Edit Box. Any changes made to this value will take effect across the whole Song.

Note that if the Note you have played in is too far away from the place it wants to be, then it is distinctly possible that pressing this button will send it further away still. This is because Notes are Quantised to the nearest point of accuracy. If, for example, your Quantise setting is 8, and the note you play in is 60 Ticks after the beginning of the Part, (where the Note is supposed to be), then pressing Quantise will send the Note to Tick position 96, because this is the closest 8th position to the Note. The Note will therefore be 36 Ticks further away from where you wanted it to be. It is important to maintain a fair degree of accuracy when Playing Notes in to make complete use of this function. Don`t rely on Prosound to get every Note right - it can only approximate what should have been Played in.

#### Nearest Length

This button, when pressed, will lengthen or shorten any selected Notes to the nearest Quantise value. It is important to remember that Start Positions are not affected by this function, only Lengths. If there are no Notes selected, this operation will occur on all Notes in any selected Parts.

It is not possible to end with a Note of 0 (or shorter) Length. If the Quantise operation would ordinarily result in a Note having a Length of 0, the Note will be assigned a Length equal to one Quantise segment, i.e. if the current Quantise value is 16 then the Note will be given a length of 48 Ticks. If the Quantise value was 8, the Length would be 96 Ticks. This only applies,

obviously, to Notes of less than one Quantise segment in the first place.

## Fixed Length

This button will fix the Length of all selected Notes to an absolute value. For example, if the current Quantise value is set to 16 then this function will make all Notes 48 Ticks in Length, regardless of what Length they were before the operation began.

## Legato

This function will lengthen Notes so that there are no spaces between the Notes. It is used primarily to `blur` Notes together in, for example, a flute or strings line. If you press successive times on the Legato button the Notes will blur further into each other, (i.e. Lengths will get longer and longer).

## Shortcut Operates

See [Shortcut Operates](#) help topic

## Dialog Display

See [Dialog Display](#) help topic

## Advanced Quantise Dialog Box

This Dialog Box allows extremely accurate control over Quantisation of every kind of Event. In this Box, Notes are treated exactly the same as any other type of Event. (The only exception to this, as will be described below, is that Lengths of Notes can be Edited. No other kind of Event has a `Length`.)

The Advanced Quantise Page allows manipulation of Event Start Positions, Lengths (in the case of Notes), and Amplitudes. (Amplitude describes the amount of something - Velocity for Notes, amount of Pitch for Pitch Bend Events, loudness for Volume, etc.) This is done by setting up a template which will be used to affect the Events in some way. The easiest way to understand this Dialog Box is through examples.

### Example 1 - Simple editing.

Suppose you want to perform a simple Note On Quantise operation. You will therefore be interested in the `Event On` functions in the Box. The Q Val mirrors the Song's Global Quantise setting, and can be edited in the same way as the Quantise Edit Box on the Main Screen. Let's say this value is set to 8.

In the `Event On` group of functions there are 2 Combo Boxes. The top one is titled `Strength`. This determines how far Notes (in this case) will be moved. By default this Combo Box displays `No Operation` which means the Start Position of the Events will not be affected in any way. To enable this function, select the `Affect %` item in the Combo Box. The number to the right of this control will turn from grey (disabled) to black. This number, which defaults to 100, determines the percentage towards total Quantisation that the Notes will be affected by. Now, make sure

that just Notes are selected for Editing by Left Clicking on the `Note` Radio button. This list of Events down the left hand side of the Box controls which Event will be Quantised.

At this point, if you press `Execute`, all selected Notes will be Note On Quantised.

Strength is used to make a group of Notes more accurate whilst not making them completely digital sounding, which can happen when everything is absolutely on the Bar or Beat.

#### Example 2 - Using the `Strength` setting.

Take the above example one stage further. Change the Quan Val to 4. Now change the `Strength` Edit Box so that it displays 50 instead of 100. When `Execute` is Pressed, the selected Notes will be moved half way towards the nearest 4th Position. If a note was previously at Tick Position 192, it would end up at Tick Position 96 - i.e. half way between 0 and 192.

So, if a Strength setting of 10% was used, the note would have moved 10% of the way from 192 (it's starting position) to 0.

#### Example 3 - Using the `Sensitivity` setting.

Sensitivity determines how accurate the Events need to be in the first place before any Quantisation will occur. If a low Sensitivity setting is selected, Events that are not very close to the correct position will not be affected.

Let's say you have just played some Notes into a Part. Some of the Notes are deliberately nowhere near the `correct` Quantise Position. You do not want to move these Notes at all, because the effect sounds good. However, there are other Notes in the same Part which are supposed to be absolutely on the Beat, and which are a little bit inaccurate. You want to move these Notes so that they appear on the Beat. Make sure the Strength is set to 100%, in order to move affected notes all the way, and set a Sensitivity setting of 30%. Now press Execute. Only the Notes within 30% of the Quantise Value will be moved, and any Notes outside this range will stay where they are.

#### Example 4 - Amplitude changes.

Amplitude, as explained above, is the amount of something, be it Velocity or whatever. Amplitude can only be Quantised if you have a central value from which to work. Suppose you have Played a series of Notes in, but the Velocities are a little too exaggerated - i.e. some of them are too loud, some of them are too quiet, but generally they are O.K. Try setting the `Base Value` to 100. Set Strength to 100%, and leave Sensitivity alone for the time being. Press Execute. The Velocities of all selected Notes will be changed to 100. This principle applies to other kinds of Events too, and may be particularly useful for smoothing a Pitch Bend in order to make the Pitch sweep less dramatic.

#### Example 5 - Amplitude changes with Sensitivity.

Sensitivity operates in a similar way for Amplitudes as it does for Event On Times. That is, it sets up a filter which only allows Events of a particular accuracy to be affected.

An extra facility applying to Amplitudes which is not available for Event On Times is that

Amplitudes can be Quantised in unit values, rather than with just percentages. This is because any particular Amplitude has an absolute minimum and maximum, which can be used to base ranges on. For example, if the Base Value was set to 100, and a unit sensitivity of 20 was selected by using the `Affect (Units)` option, any Notes with Velocities of between 80 and 120 will be Quantised towards 100. If, in this case Strength was set to 100%, all Velocities between 80 and 120 would be set to 100.

### Example 6 - Quantising Lengths.

Lengths are only applicable to Notes. All other Events have no concept of `Length`.

There 3 operations you can perform on Lengths are:-

- Length Quantise
- Fixed Length
- Legato

These 3 operations are described above for the Basic Dialog Box, and the following will expand on what is described above.

Length Quantise serves to change Note Lengths to the nearest Quantise Value. The amount the length will be changed by is determined by the `Strength` setting. So, if a Strength of 50% is set, the Note lengths of selected Events will be changed so that they are 50% closer to the nearest Quantise Value. Sensitivity operates in the same way as described for Event On Time and Amplitude. In other words, it sets up an `accuracy filter` within which Note Lengths must lie in order for them to be changed. A Sensitivity setting of 100% would therefore make sure all Note Lengths are affected.

Fixed Length sets an absolute Length towards which Notes will be moved. In this case a Strength setting of 50% would change Lengths so that, for example, when a Quantise Value of 8 is set, a Length of 768 would be changed to 480, i.e. half way between 192 (an 8th in 4/4 Time) and 768 (the original length). Sensitivity operates as usual.

Legato operates in the same way as the Basic Dialog Box but allows Strength and Sensitivity to be controlled as above.

## Set Controller

See Set Controller help topic

## Undo / Redo

See Undo and Redo help topics

## Shortcut Operates

See Shortcut Operates help topic

## Dialog Display



See [Dialog Display](#) help topic

## Quantise Single



This function operates only in the following Song Viewer Pages:-

Arrange Page

Key Editor Page

Drum Editor Page

In the Arrange Page, Left Clicking on a Part will move the Part to the nearest Quantise Value. This may make Parts overlap, in which case you will be asked if you want to Merge the Parts. If you do not, the operation will be cancelled.

In the 2 Event Editors, this function will individually Quantise the Start Position of the Note Clicked on. It will be moved a distance determined by the current Quantise value.

## Record Options

There are 3 buttons displayed permanently on the Main Screen. The leftmost button, marked `I`, controls the `Punch In` facility. The control is darkened when active.

### Punch In

This function controls whether the Song will automatically begin Recording as soon as the Record Button is pressed, or whether Prosound will await the first external Event being played before beginning Recording. If the facility is turned On, Prosound will enter a Standby mode when Record is pressed, effectively just Playing the Song. When a key is pressed on your keyboard or other external device, a Midi signal will be sent to the Sequencer to tell it that something has just happened. Prosound will then automatically initiate the Recorder. The beginning of the Part will be from the first Note Played.

### Punch Out

This function will determine whether or not Recording automatically shuts off when the End Locator is reached. If activated (i.e. the button is painted dark grey) this will happen. If Recording begins after the End Locator, Punch Out will have no effect.

### Loc On / Loc Off

This Toggle button determines whether pressing the Record button starts Recording at the current Song Position or whether the Song Marker jumps to the Start Locator position.

As well as the above, there is also a Drop Down button which opens a Dialog Box offering more control over the Song's Recording Options.

### Events To Record

This list of Check Boxes determines which kinds of Midi Data Prosound will acknowledge. If the Box to the right of each item is not checked, no Events of that type will be Received or Output from Prosound. It is quite common, for example, to remove System Exclusive Messages and After Touch Events because they can be very Midi Intensive and liable to create a traffic jam of Midi Data, thus causing important information such as Notes to be lost.

### Count In

Count In determines whether a Metronome introduction will be initiated every time Record is pressed. This is useful in order to get familiar with the speed and timing of the Song so that the Notes or other Events typed in during Record are accurate from the very beginning.

There are 3 Radio buttons in this group:-

#### Off

No Count in is given. The Song starts Recording immediately the Record button is pressed.

## Precount

This function gives you upto 8 Bars of Count In before Recording starts. The type of Metronome you hear will be determined by settings made in the Metronome Dialog Box. Whilst the Count In is operating, the Record Indicator will change colour to amber. When the Song begins Recording it will change to red.

## Preroll

This function takes the Sequence backwards in time by a certain number of Bars. These Bars will then be played. When the Song Marker reaches the Start Locator, Prosound will enter Record mode. The Record Indicator will change from Amber to Red as above.

## Record From Start Loc

When this function is activated, the Song Marker will jump to the Start Locator whenever Record is pressed. This allows fast indexing to a particular point in the Song for Recording purposes.

## Dialog Display

See Dialog Display help topic

## Record



The Record button begins Recording. This is the process by which Notes or Other Events are saved in the computer's memory where they can later be Edited and Saved.

The Record button has 3 different colours, dull red, amber and bright red.

When the dull red light is displayed, the Song is not Recording.

When the amber light is displayed, the Song is in `Prepare` Mode. This is where the Record button has been pressed but you are given a Count In before Recording actually begins.

When the bright red light is displayed, the Song is in Recording mode. This means that any Notes played in from an external device such as a keyboard will be stored on the Active Track. Pressing Rewind, Fast Forward, Stop, Play or Record again will take Prosound out of Recording mode.

## Redo



This button removes the last Undo Operation.

Suppose you had pressed Undo 3 times and accidentally deleted some Events you wanted to keep. Pressing Redo will cancel out the last Undo operation. Pressing Redo again will backstep once more through the Undo operations (in this case Redoing the second Undo).

## Repeat



This function allows either Parts or Tracks to be Repeated any number of times.

### Part Relationship

The first decision to make when Repeating Parts is whether the new Part(s) will be a Parent or Child Part. A Radio button group containing these 2 options allows this choice to be made. Prosound defaults to Repeating Parts as Child Parts, but if this setting is changed, it will be remembered until changed again, even after the program has been shut down.

The next decision to make will be how many copies you want. This is set via the Edit box in the top middle of the Dialog Box. Upto 99 copies can be made.

### Repeat Options

When the Dialog Box is opened each time, you can set the repeat value to a static number, (for example a 1 in the **Default To** Edit Box will mean that each time the Dialog Box is opened Prosound will be ready to Repeat 1 Part). The other option, **Fix Repeat Value**, means that if, say, you had just Repeated a Part 4 times, the number 4 will stay in the `times` Edit Box each time you re-enter this function.

### Copy Selected Track

This button does not rely on any of the other settings in this Dialog Box. It makes an identical copy of the Active (Selected) Track. All Parts and Events of every description are copied.

### Undo / Redo

See Undo and Redo help topics

### Shortcut Operates

See Shortcut Operates help topic

### Dialog Display

See Dialog Display help topic

## Rewind



This function rewinds the Song towards the beginning of the Sequence. You will see the Song Marker accelerate backwards, and stop when Song Position 000:01:000 is reached.



## Select Region



This Editor Tool operates in the Arrange and Key Editor Pages. Following is a description of the various facilities available in these two Song Viewer Pages.

### Arrange Left Click

This function allows a rectangular group of Parts to be selected for Editing purposes. Any Parts lying either partly or wholly in the rectangle will be selected.

This function is also accessible with the Left Point and Drag Tool, but the difference is that this Tool allows selection of a group of Parts that lie completely within other Parts and which could not be selected as a group with the Pointer since Left Clicking on a Part with the Pointer will select it then move it. The Select Region Tool will not move Parts anywhere - it will only select them.

### Arrange Right Click

This function allows a freeform shape to be drawn around Parts which, when the Right button is released, will select any Parts which lie within the Region drawn. Complex shapes can be drawn around unconnected Parts and they will all be selected providing the drawn line intersects the Parts at some point.

A possible advantage that the Right Tool has over the Left is that previously selected Parts are not deselected. This means that, with several small regions, you can accumulate the selected group of Parts until you have selected every one you want to Edit.

Note:- this function is fairly processor intensive, and should not be used on slower machines to select large regions. Use the rectangle if possible since this can calculate the selection Region much faster.

### Key Editor Left Click

This function is very similar to the Arrange Tool described above. It allows selection of a rectangular Region of Notes in the Key Editor.

### Key Editor Right Click

This function is very similar to the Arrange Tool described above. It allows selection of a user-definable Region of Notes in the Key Editor. As with the Arrange Tool, we recommend that you do not use this Tool for large areas since the Left Tool is much faster. However, it does allow Notes to be selected in groups.

## Snap

The Snap value determines where Parts or Events will be inserted into the Song using the graphical Song Viewer. It is effectively an `accuracy` Tool which corrects imperfections in inserting data.

In the Arrange Page, the Snap Value does not have a number value. It is either `On` or `Off`, (represented by a cross in the bottom left hand corner of the Snap Box). When Snap is `On`, any operations performed in the Arrange Page will be `Snapped` to the nearest Bar. When it is off, the Parts will be `Snapped` to the nearest Beat.

For the Event Pages, Snap has numerical values. The Snap values that are allowed are 1, 2, 4, 8, 16, 32 and 64. These numbers are relative to 1 Bar, and determine how far towards the nearest Bar, in fractions, Events will be `Snapped` when an Edit operation is performed.

Suppose the Snap value is 8. and a Note is inserted using the Brush. If the mouse is Clicked at Tick Position 170, the Note will be inserted at Tick Position 192, being the nearest 8th value. At Snap setting 1, Events will be `Snapped` to the nearest Bar. This is the most extreme Snap which can be carried out.

## Triplets

There is a Triplet facility which can be used to Edit Events according to triplet, rather than standard, notation. It is accessed using the `T` button at the extreme top left hand corner of the screen.

When Triplet is `On`, 3 Events will fit into the space ordinarily occupied by 2. It is often used for Drum rolls to create a `swing` feel.

## Solo



This facility mutes all Tracks other than the currently Active Track.. It is used primarily for single Track Editing after a new Part has been played in. Pressing the Solo button activates the facility.

When you deactivate the function, Parts muted before you Solo`d will be returned to their pre-Solo status. So, if Tracks 3, 4 and 5 were already Muted when Solo was pressed, when you come out of the function these Tracks will stay muted.

## Song Position

The Edit Box at the top of the Main Screen contains the current Song Position. This number is represented in 3 segments representing Bars, Beats and Ticks.

When the Play button is pressed, the Song will begin Playing from the current Song Position. Any changes made to the B.P.M. or Time Signature values on the Main Screen will also take effect at the current Song Position.

## Scissors



This Editor Tool allows Parts or Tracks to be cut up or glued together. The Arrange Page and Key Editor Page support this function as described below.

### Arrange Left Click

With this Tool, any Parts in the Arrange Page will be cut in two at the point where the mouse is clicked. For example, if you had an 8 Bar Part, beginning at Song Position 000:01:000, and Cut the Part at Bar 4, the result would be 2 new Parts, each 4 Bars in length.

If you cut a Parent Part (i.e. a Part with Child Parts attached), all the Children will be `matured`, and also Cut into 2 new Parts.

It is not possible to cut a Child Part, since it would instantly glue back together as a result of the Dynamic Glueing facility.

Click and Drag allows multiple Cuts to be performed in this Page.

Do not confuse this definition of the word `Cut` with the Clipboard `Cut` facility.

### Arrange Right Click

This Tool allows 2 Parts to be Glued together. The Parts do not need to be touching each other - in this case the Length of the new Part will be from the Start Position of the first Part to the End Position of the second Part.

### Key Editor Left Click

This Tool is very similar to the Arrange Tool described above. It allows Notes to be Cut at the point of Clicking. Click and Drag also operates to allow several cuts to be made. This might be particularly useful if you had drawn in one long Note, say 4 Bars long, and you wanted to cut it up into Notes of 1/16th of a Bar each. To do this, set the Snap value to 16, and simply Click and Drag across the Note. Cuts will be inserted at the nearest Snap value.

### Key Editor Right Click

This Tool glues Notes together. Click on the first Note and see it join to the first Note it finds after its own Start point.

# Transpose



There are 3 different functions within this Dialog Box.

## Transpose (Move Notes Vertically)

This function, when activated, increases or decreases the Pitch of all selected Notes by an absolute value. For example, if the Edit Box to the right of this function displayed the number 2, the selected Notes would be moved upwards in Pitch by 2 semitones.

## Velocity Increase / Decrease

This function makes any selected Notes louder or quieter.

## Reposition (Move Notes Horizontally)

This function moves selected Notes to the left or right in relation to the rest of the Song. For example, Repositioning by 384 Ticks would move the Notes forwards by 1 Beat.

## Default Values

This Group contains 2 Radio buttons.

### Fix Transpose Value

This function means that when the Transpose Dialog Box is reopened after being shut down it will contain the value numbers for Vertical, Horizontal and Velocity operations that were set last time. If, for example, you have just performed a Vertical Transposition by 2 semitones, the number 2 would appear in the Edit Box the next time the Dialog Box was opened.

### Default To

This function allows a value to be set to which all 3 Transpose functions will default when the Dialog Box is opened. If, for example, the number 1 was inserted in this Edit Box, the Vertical, Horizontal and Velocity Transpose functions would initialise to 1 each time you entered the Dialog Box.

## Undo / Redo

See Undo and Redo help topics

## Shortcut Operates

See Shortcut Operates help topic

## Dialog Display

See [Dialog Display](#) help topic

## Undo



This function fills a Buffer with either Event, Part, or Track information every time an operation is performed in Prosound. (See Below for exception to this rule).

Prosound's Undo Buffer is of user-definable size, and can be set in the Preferences Dialog Box.

When an operation is performed, for example, a Note is deleted, then Prosound remembers which operation was last performed, so that, if you change your mind and want to bring the Note back, simply pressing the Undo button will cause the Note to be re-inserted. Returning to the example, the previous action before this Note was deleted might have been a Note being resized. In this case, pressing Undo the first time will cause the Note to reappear as explained above, but pressing Undo a second time will cause the resizing operation to be undone.

This function allows many hundreds (or even thousands!) of Edit operations to be stored and undone.



## Zoom



This function magnifies the contents of one or more Song Viewer Pages so that finer manipulation of the Events or Parts can be undertaken. The Zoom facility tries to magnify the Page so that the point at which you click remains on screen. If you Zoom in a very long way the point may eventually disappear, but this can be remedied by simply releasing the Zoom button half way through the Zoom and pressing again. This will re-orient the magnifier.

Left Clicking Zoom in, so that information can be seen in greater detail, whilst Right Clicking will Zoom out, allowing more of the Sequence to be seen.

# Keyboard Shortcuts

<u>Auto Quantise</u>	a
<u>Bank</u>	Shift b
<u>B.P.M.</u>	f5
<u>Copy</u>	Ctrl Insert
<u>Cut</u>	Shift delete
<u>Create Track</u>	Insert
<u>Cycle</u>	c
<u>Delete (Context Sensitive)</u>	delete
<u>Delete Dialog</u>	Ctrl delete
<u>End Locator</u>	e
<u>Fast Forward</u>	right bracket
<u>Global Dialog</u>	Ctrl g
<u>Global Shortcut</u>	g
<u>Help</u>	f1
<u>Instrument Change</u>	Shift i
<u>Instrument Map</u>	Ctrl i
<u>Metronome Dialog</u>	Ctrl m
<u>Metronome On/Off</u>	m
<u>Midi Channel</u>	Shift c
<u>Midi Dialog</u>	Ctrl w
<u>Mute</u>	Shift m
<u>Open File Dialog</u>	Ctrl o
<u>Pan</u>	Shift p
<u>Paste</u>	Shift ins
<u>Patch</u>	Shift p
<u>Play</u>	Enter
<u>Preferences Dialog</u>	Ctrl r
<u>Quantise Dialog</u>	Ctrl Q
<u>Quantise Shortcut</u>	Q
<u>Quantise Value</u>	f3
<u>Quantise Triplet button</u>	Shift f3
<u>Record</u>	#
<u>Record Dialog</u>	Ctrl v
<u>Record Overdub</u>	v
<u>Record `In`</u>	i
<u>Record `Out`</u>	o
<u>Rename</u>	esc
<u>Repeat Dialog</u>	Ctrl p
<u>Repeat Shortcut</u>	p
<u>Rewind</u>	left bracket
<u>Save File Dialog</u>	Ctrl f
<u>Save Sequence Shortcut</u>	f
<u>Snap Value</u>	f2
<u>Snap Off</u>	Ctrl f2
<u>Snap Triplet</u>	Shift f2
<u>Song Position</u>	f6
<u>Song Time</u>	f7
<u>Solo</u>	Ctrl s

<u>Start Locator</u>	s
<u>Stop</u>	spacebar
<u>Sync Dialog</u>	Ctrl y
<u>Sync On/Off</u>	y
<u>Time Signature</u>	f4
<u>Toolbox</u>	x
<u>Track Name</u>	Shift t
<u>Track Type</u>	Shift y
<u>Transpose Dialog</u>	Ctrl t
<u>Transpose Shortcut</u>	t
<u>Undo</u>	backspace
<u>Volume</u>	Shift v

## Song Viewer Tabs

<u>Song Viewer Editor</u> Left Click	↵
<u>Arrange</u> Left Click	1
<u>Block Edit</u> Left Click	2
<u>Part Store</u> Left Click	3
<u>Mixdown</u> Left Click	4
<u>Logical Edit</u> Left Click	5
<u>Drum Ediitor</u> Left Click	6
<u>Key Editor</u> Left Click	7
<u>Notepad</u> Left Click	8
<u>List Editor</u> Left Click	9
<u>Event Editor</u> Left Click	0
<u>Master Track</u> Left Click	-
<u>Status Bar</u> Left Click	=
Song Viewer Editor Right Click	Ctrl ↵
Arrange Right Click	Ctrl 1
Block Edit Right Click	Ctrl 2
Part Store Right Click	Ctrl 3
Mixdown Right Click	Ctrl 4
Logical Edit Right Click	Ctrl 5
Drum Ediitor Right Click	Ctrl 6
Key Editor Right Click	Ctrl 7
Notepad Right Click	Ctrl 8
List Edit Right Click	Ctrl 9
Event Editor Right Click	Ctrl 0
Master Track Right Click	Ctrl -
Status Bar Right Click	Ctrl =

## Arrange



The Arrange Page is the central Part Editing facility. It displays all Parts on all Tracks in the visible range. Closely related to the Arrange Page (in effect it is a `second` Arrange Page), is the Block Edit Page.

Parts come in two kinds, Parents and Children. Parent Parts are displayed as Blue rectangles, whilst Child Parts are displayed as green rectangles.

Whenever an Event is inserted into a Track, a Part will be created (if one doesn't already exist) and displayed in the Arrange Page. Similarly if you create a Part using the Brush or Pencil, it will appear in the Arrange Page.

The left hand side of the Arrange Page displays text information particular to each visible Track. The `Text` window is separated from the `Graphic` window by a movable curtain, (the white strip down the middle of the Page). This curtain can be picked up by a Left Click and Dragged left or right. When the button is released, the Text and Graphic windows will be resized within the Arrange Page.

The items in the Text window are:-

### Track Name

This item is used to store the Track's Name. It can have a maximum length of 28 characters.

Right Clicking on this item brings up an Edit Box which allows a new Name to be inputted.

If you Left Click on the Track Name and Drag Vertically or horizontally you can move the entire Track up or down. All Parts and Events on that Track will also be moved to their new destination.

### Spectrum Analyser (S.A.)

This provides a graphical representation of the Velocities of Notes on the Track. The analyser takes an average of Velocities which occur at exactly the same time to give as accurate as possible an indication of how loud the Notes in any Part are. As the Spectrum Analyser is increased in size it displays more accurately the velocities, but is processor intensive and so may slow the Sequencer's other Pages down. (It is very important to bear in mind that no graphical operation can ever interfere with Events being processed correctly.)

### Type

A Track can be either of the `Key` or `Drum` type. This is selected by Left Clicking on the word `Key` or `Drum`.

A Key Track is one which will display its data in the Key Editor Page. A Drum Track will be displayed in the Drum Editor. The only difference between types is that Drum Tracks can have Note Off commands disabled. For anyone using a drum machine this will mean that there is less Midi traffic between the computer and machine. So, when you change between a Key Track and

a Drum Track, you will be asked whether you want to disable Note Off commands for that Track. In order to get the Note Offs back, it would be necessary to convert the Track back to a Key Track.

## Mute

This facility allows a Track's output to be removed from the Sequencer. In other words, you will not hear any of the Notes on that Track being played.

It can be used in conjunction with the Solo function.

## Chn (Channel)

This number represents the Midi Channel that Events on a particular Track will respond to. This is used in conjunction with an external device, such as a keyboard, to `multi-track`, playing many sounds at once. It is common (although by no means essential) to have one keyboard sound per Midi Channel, so that sounds can be easily changed without affecting others.

## Instrument

This describes the Instrument to which a particular Track is assigned. Whenever a Midi Channel change is made, it is possible that this value will also change, if the new Midi Channel is outputting to a different device.

When you Left Click in this section of the Text window a Pop up Box appears allowing a new instrument from those on disc to be selected. For more information on this facility see Instrument Map Dialog Box.

## Volume

This setting sets a Global Output Volume for the Track. The lower this value is, (in a range of 0 to 127), the quieter the Notes on this Track will be.

## Pan

This number displays the amount of Left or Right Pan which is applied to the Track. It's range is -127 to 127.

## Patch

This item describes the keyboard Patch which has been assigned to a particular Track. Patches are set up using the Instrument Map Dialog Box. When this item is Left Clicked on, a Pop up Box appears, allowing 1 of 128 Patches to be selected from the Track's Instrument. If no instrument has been assigned to the Track in question, a number representing the Patch number will be displayed instead.

## Bank

The number of Banks which are assigned to a particular Instrument is determined in the

Instrument Map Dialog Box. Banks are represented numerically. A Bank is a number of Patches collected together in one Instrument. For example, a keyboard might have 4 separate Banks of sounds, each with different Patch names, which could be individually assigned to the Instrument and selected in the Arrange Page..

## The Graphic Window

The right hand side of the Arrange Page is occupied by the Graphic window. This is where Parts are displayed graphically, in the form of rectangles. Blue Parts are Parent Parts. Green Parts are Child Parts.

Parts can be created either by Recording on the keyboard, or Drawing them in using the Editor Tools. Parts can be moved forwards and backwards in time, and also up or down across Tracks. All these functions are accessed by using the Arrange Page

## Event Display



This [Song Viewer](#) Page allows Editing of any type of [Event](#). This includes:-

- Notes
- After Touch Events
- Pitch Bend Events
- Poly Pressure Events
- Controller Events

The type of Event which is displayed can be selected from a Combo Box in the top left hand corner of the Page.

Slightly different rules apply to Notes. A Note cannot be inserted from the [Event Editor](#). This is because Prosound does not know which Pitch the inserted Note should be put on. The Event Editor is only really concerned with the Note's velocity, which is displayed as a Red upright rectangular Bar. The y axis of the Event Graph shows how loud the Note is, on a scale of 0 to 127. Notes can, however, be erased from the Event Editor, by using the [Brush](#) with a Right Click. They can also be selected, using the Left [Point and Drag](#) Tool, and [Quantised](#), [Transposed](#), or any other Edit operation applicable to Notes. See also the description for the [Pencil](#) Tool for details on how to Draw curved or straight lines in order to change the Note's [Velocities](#).

The other types of [Events](#) listed above all follow identical rules. They can be directly input using the [Brush](#), and Edited in the same way as the Note description above for other operations.

## Set Controller

Three Controller Event types can be accessed easily from the Selection Combo Box. These values can be changed by pressing the [Set Controller](#) button.

## Join Events

This Check Box, when `On`, Draws horizontal lines from [Event](#) to Event. These lines represent the last value the Event type was set to. For example, if 2 After Touch Events were inserted, the first with a value of 50 and the second with a value of 100, activating `Join Events` would Draw a line between the 2 Events at value 50. When the second Event is reached, the line will be Drawn horizontally from value 100 to the right hand side of the Page.

This function is used to display which Event value the keyboard or other external device has been left set to. It must receive a default value before it is initialised to 0, and before this happens, any Notes which are sent to the keyboard will be affected by the amount of After Touch continuing at that [Song Position](#).

This function is designed only for visual assistance - it does not actually do anything to the Events themselves.

## Key Editor



The Key Editor is the most important Page for Editing Notes. It displays Notes as horizontal rectangular Bars. Blue rectangles represent Notes belonging to Parent Parts, whilst green rectangles represent Notes belonging to Child Parts. If an Edit operation (such as deleting a Note) is performed on a Child Part, the Part will automatically `mature` to become a Parent Part. This is because Child Parts are always pure replicas of their Parents. They cannot, therefore, be Edited in any way.

The Key Editor has two display modes. You can toggle between these modes by pressing one of the two small buttons in the extreme top left hand corner of the Page. The button with thicker Black Bars (on the very left) will make the Key Editor display Notes at the same height regardless of whether they are white or black keys. The button to it's right will display Notes in `real` keyboard format - i.e. white Notes will be slightly larger than black Notes, making the screen look more like a keyboard.

Left Clicking on the keyboard to the left of the Page will Play the Note Clicked on.

The following Editor Tools can be used in the Key Editor:-

- Point and Drag
- Select Region
- Move
- Brush
- Pencil
- Resize
- Scissors
- Quantise Single
- Zoom
- Mute
- Hear Notes

Whenever the mouse is Clicked in the Key Editor, the Arrange Page will change so that any Part at that Song Position will be selected, and any other Parts will be deselected. This is so that any operations such as Quantise which are activated will always operate on the last Part Clicked in, either directly from the Arrange Page, or indirectly from the Key Editor Page.

Locators can be updated by Clicking in the Locator Strip at the top of the Page.



## List Editor



This Page displays, in text form only, every Event contained in a Sequence. By default, only Notes are displayed. This is because the Check Boxes down the left hand side of the Page determine which Events will be displayed. Clicking on any of the other Check Boxes will cause the corresponding Events to be displayed.

The value box in the top left hand corner of the Page allows a different Track to be selected. (This is useful when the Arrange Page is closed.) When you Left Click in this Box, the Value Edit Box appears, containing the currently selected Track. Any of the existing Tracks can be selected.

## Select

The `Select` arrows allow selection on any single Event for individual Editing. If another Song Viewer Page is used to select Events, all selected Events will be shaded white. Left Click on one of the arrows to select an Event.

## Insert Event

This button creates an Event of a type determined by the Combo Box selection to the right of the button. The Event is inserted at the current Song Position, and will contain default values set in the Preferences Dialog Box.

## Delete Event

This button deletes any selected Events.

## Main Event Editor

### Start Position

This item displays the Event`s current position in the Song. It is measured in Bars, Beats and Ticks.

### Length

This item is relevant only to Notes. The figure gives the Note`s Length, in Ticks.

### Event Type

This item is for display purposes only, and indicates the type of Event. The types listed down the left hand side of the Page can appear in the List Editor.

### Value 1

This value depends on what kind of Event is being displayed. Following is a list of Events with their corresponding values

Note - Pitch  
After Touch - Modulation value  
Pitch Bend - Amount of Pitch change  
Poly Pressure - The Note to which changes apply  
Controller- Modulation Value  
System Exclusive - No Value

## Value 2

This value depends on what kind of Event is being displayed. Following is a list of Events with their corresponding values

Note - Velocity  
After Touch - No value  
Pitch Bend -No value  
Poly Pressure -Modulation value  
Controller- No Value  
System Exclusive - No Value

## Set Controller

See [Set Controller](#) help topic

## Logical Editor



This Song Viewer Page allows mathematical operations to be performed on Notes (and only Notes). It will apply only to selected Parts. The Page is divided into three main areas:-

### Data to Test

This section of the Page lists which attributes of a Note will be examined when Prosound is determining whether to perform an operation.

### When To Edit

This section controls which range of Notes will be affected. For example, you might want to Delete all Notes above Pitch c#4. In this case you would use the top `Data to Test` strip labelled `Note (Key)` and set the `When To Edit` section to `Above` and `c#4`. Pressing the Delete button performs the desired operation.

Two Value Boxes are required only when using the `Between` facility, because this sets a maximum and minimum value within Notes will be affected. For all other operations, the second Value Box will remain greyed out.

### Operation To Perform

This section determines what will be done to the Notes.

For example, select `Increase by` and set the Value to the right to `3`. Pressing execute will Transpose all Notes within the `When To Edit` range up 3 semitones.

### Execute

This button performs the operation selected in the `Operation To Perform` section on all Notes which fall within the `When To Edit` range.

### Quantise

This button performs a Note On Quantise on the Notes which fall within the `When To Edit` range.

### Delete

This button Deletes all Notes within the `When To Edit` range.

### Undo / Redo

See Undo and Redo help topics

## Master Track



This Song Viewer Page allows Time Signature and B.P.M. settings to be applied to a Sequence.

Ordinarily a Song will have one Time Signature (very often 4/4), and one B.P.M. (for example 120 beats per minute). These values will apply throughout the length of the Song. However, it is also fairly common to see Time Signature or B.P.M. changes occur once a Song is underway, (for example changing the Time Signature from 7/8 to 9/8 for a chorus) The Master Track allows both of these values to be controlled in a split screen format. The top part of the Page is the Time Signature area.

### Time Signature

The Time Signature strip is split into Numerator and Denominator on top and bottom respectively. There will always be a Time Signature at Song Position 000:01:000, and this is the Song's default Time Signature. Time Signatures can only be inserted on a Bar, and this is done by selecting the Brush and Left Clicking. When the Time Signature first appears, it will have default values of 4/4, and clicking in either of these Boxes will allow them to be changed by using the Value Edit Box.

Time Signatures can be deleted by Right Clicking with the Brush. The first Time Signature located to the left of the mouse Click will be removed.

### B.P.M.

This section of the Page operates in a very similar fashion to the Event Editor. It allows B.P.M.'s to be inserted using the Left Brush, deleted using the Right Brush, or edited using the Point and Drag or the Pencil Tool.

A possible use of having many B.P.M. Events on a descending scale would be to slow a Sequence down or speed it up in a smooth way.

The B.P.M. Value Edit Box allows accurate changes to be made to individual B.P.M. Events. The up and down arrows to the right of the Edit Box will increase or decrease the selected B.P.M. by increment values determined by the Combo Box to its right. This Combo Box contains items called Whole Units, Tenths, Hundredths and Thousandths.

## Mixdown



This facility allows Parts on different Tracks to be merged onto one new Track. The `Source` strip in the Arrange Page determines which Tracks will be mixed down. There can be as many Source Tracks as you want. The Destination Track is the Track to which the Source Tracks will be copied.

Only information lying between the Start and End Locators will be mixed down.

For example, suppose you had Recorded Parts onto Tracks 1, 2 and 3. If you decide you want to put them all into 1 new Part together. Open up the Mixdown strips by pressing the Mixdown Tab, and set Tracks 1, 2 and 3 as `Source` Tracks. Now select Track 4 as the Destination Track. Press the execute button at the top of the Arrange Page and a new Part will appear on Track 4, containing all Events from the other 3 Tracks within the Start and End Locators.

## Status Bar



The Status Bar is used to display additional information for various Song Viewer Pages.

## Mouse Position

Mouse Position simply mirrors the Value Box at the extreme top right of the Main Screen. The value to the right of the Mouse Position depends on which Page is open, as follows:-

Arrange - Track Number. (Track 0 is always at the top of the list of Tracks.)

Part Store - Line Ordinal.

Key Editor - Key Value. (The Note's Pitch.)

Event Editor - Y Value. (The Event's 'amount' value, e.g. Velocity for Notes.)

Master Track - B.P.M. value.

## Scroll Bar Pos

This value is used in conjunction with the Thumb of the Scroll Bars separating each Song Viewer Page. When a Scroll Bar Thumb is Clicked on and Dragged to the left or right, this value will display the Song Position (in Bars), which the Song will move to when the Thumb is released. The range these Scroll Bars will cover will be determined by the dynamic 'Last Song Position'.

## Song Ruler

This is the light green strip at the top of the Status Bar. It allows any point in the Song to be accessed immediately.

As the length of the Song increases, (or reduces), this Ruler will update automatically so that the entire Song is represented across its length. Simply click anywhere in the Ruler to jump to that point in the Song.

## Song Viewer Editor



This Page contains user defined Page layouts within the Song Viewer.

Suppose you had a particular Page configuration such as Arrange, Key Editor and Event Editor, all at slightly different heights (using the Move Window Feature). Each time any other Page is opened or closed, these settings will be upset. So, enter the Song Viewer Editor, and simply press `Store Layout`. The Editor will be immediately shut down. When you go back in, you will see a picture of the Arrange, Key, and Event Editor Pages under the title `Window Contents`, reminding you which Pages are saved. If you press `Preview` and hold the button down, you will see what size the Pages will be if you select that option, just to make sure it's the right one. Press the large number 1 to the right of the Preview button and these 3 Pages will be opened at the correct sizes.

Song Viewer set-ups are saved with the Sequence, and will therefore be remembered every time the Sequencer is run.

If you want to remove a configuration, press the `Clear Layout` button, then press the large number identifying the configuration to be deleted.

## Drum Map

A Drum Map is a collection of standard Drum settings which can be saved to disk independently from the Song and therefore loaded into other computers as a separate file.

Suppose you owned a keyboard which had a bank of drum sounds in it. Each Note in the Drum Editor can be assigned a name, (and several other values), and let`s say you had configured the Drum Editor so that all the keyboard`s Drum Names were labelled in the Drum Editor. If you save the Drum Map to disk, (using the Save File Dialog Box), you can then install these settings on another computer, allowing the keyboard to always have a properly labelled set of Drum Names.



# Event

Events are the building blocks of a Song. The following are the `basic` Events:-

- Notes
- After Touch Events
- Poly Pressure Events
- Pitch Bend Events
- Controller Events

## Notes

Notes are by far the most common Events. Because you usually require far more control over Notes than any other kind of Event, there are some [Song Viewer](#) Pages and [Functions](#) which only apply to Notes. The [Key Editor](#) is where the majority of Note Editing is usually performed. This screen displays Notes as blue or blue/green rectangles. (Blue Notes belong to [Parent](#) Parts and blue green Notes belong to [Child](#) Parts.)

The [Key Editor](#) is well equipped to display Start and End values of Notes, but to see how loud they are (i.e. their Velocity), you need the [Event Editor](#). This Page displays [Velocities](#) as red vertical bars with a range of 0 to 127. Here, Velocities can be increased, decreased, or affected in many other ways.

The [Drum Editor](#) is used to display Drum Notes. This Page, whilst not as flexible as the Key Editor, allows individual Notes to be named, and default settings such as Velocity and Length to be assigned. This Page does not represent Notes in rectangles, but in Drum Diamonds instead. This is because, often, a Drum sound is just a hit. In this case there is no real concept of `Length`.

## After Touch Events

After Touch Events control Note volume levels across the entire [Midi Channel](#), after the Notes have been pressed. Most keyboards respond to these messages, and allow `texture` to be added to the Note by modulating it's volume after the initial key press.

## Pitch Bend Events

These Events control the Note's Pitch relative to it's original key. For example, if you [Recorded](#) a C4 Note into a [Part](#), and drew a Pitch Bend curve into that Part using the [Event Editor](#), you would hear the Note's Pitch go up and down when you play it back.

## Poly Pressure Events

These Events perform the same function as After Touch Events, but they only apply to single Notes in the Part. This is achieved by inserting a Poly Pressure Event, in either the Event Editor or List Editor, and assigning the `Note` value of the Poly Pressure Event to the single Note to be affected. (This can be done in the List Editor). The `modulation` value can then be set, (usually in the Event Editor), resulting in volume changes only occurring on that Note.

## Controller Events

There are 128 different Controller Events, listed below. This list is only a convention, and there is no guarantee that a particular keyboard will follow the same convention. Your keyboard manual should have details of Midi Controller assignments in it's Specifications Section. Any numbers not included in the list below have `unassigned` Controller values and may respond to any keyboard specific message.

Bank_select	0
Modulation_wheel	1
Breath_control	2
Foot_pedal	4
Portamento_time	5
Data_entry_knob	6
Main_volume	7
Balance	8
Pan	10
Expression	11
General_purpose_1	16
General_purpose_2	17
General_purpose_3	18
General_purpose_4	19
Sustain_pedal	64
Portamento	65
Sostenuto	66
Soft_pedal	67
Hold2	69
General_purpose_5	80
General_purpose_6	81
General_purpose_7	82
General_purpose_8	83
Ext_effect_depth	91
Tremolo_depth	92
Chorus_depth	93
Celeste_depth	94
Phase_depth	95
Data_increment	96

Data_decrement	97
Nrpn	98 Lsb
	99 Msb
Rpn	100 Lsb
	101 Msb
Reset_all	121
Local_control	122
All_notes_off	123
Omni_off	124
Omni_on	125
Mono_on	126
Mono_off	127

## Part

Parts are used to hold related Events together in an editable format. They are effectively containers into which Events will be placed, The Event will be stored in memory relative to the Part, which means that if you, for example, move the Part forwards by 1 Bar the Events inside the Part will also move forwards 1 Bar.

If a Part containing Events is deleted, all the Events in the Part will also be deleted.

Most Editing operations take effect only on selected Parts. It is therefore important to become used to selecting the correct Part to Edit before carrying out any operation. (When Events are Edited in any of the Event Editors, the correct Part will automatically be selected.)

## Track

Tracks are similar in concept to tracks on a multi track tape machine. They hold all the information necessary to play a piece of music. This includes all the information in the Text window of the Arrange Page, (including Name, Midi Channel etc), Parts and Events.

When a Track is deleted, all the information stored on it will also be deleted.

Prosound has a maximum of 256 Tracks, but the top 3 are used internally and may not be Edited or deleted. (These Tracks are numbers 253, 254 and 255.)

# Song

The Song sits at the top of the data tree. The tree looks like this:-

- Song
- Track
- Instrument Map
- Part
- Drum Map
- Event

The word `Song` describes everything in the Sequencers memory. When a new song is set up it will be assigned 16 empty Tracks, without any Parts or Events.

## Editor Tools

Editor Tools are used to affect Parts or Events in the Song Viewer. Listed below are the various Tools which can be used to perform Edit operations.

Point and Drag  
Move  
Select Region  
Brush  
Pencil  
Resize  
Scissors  
Quantise Single  
Zoom  
Mute  
Hear Notes

If you have a 3 button mouse you can use the middle button to open a Tool Box from almost anywhere on screen. This Tool Box allows Editor Tools to be selected very quickly.

# Getting Started

Welcome to Prosound.

This introduction provides all the information you will require in order to get a song up and running. Few of the advanced features of the program are covered in this section - please refer to the individual descriptions of the functions for more complete assistance.

Every function in Prosound is very rapidly accessible. The majority of them can be accessed immediately from the Main screen; others are no more than one button press away, from either the menus or from context sensitive buttons. Furthermore, there are no double - click operations whatsoever. Most tools for editing information have left and right button facilities. If you have a three button mouse we recommend utilising the middle button, which will allow you to select Editor Tools from a Pop up Box, rather than from the Toolbar above.

The majority of the screen is occupied with the Song Viewer. This is the window in which all the song editing will be performed. Various Pages can be opened inside the Song Viewer, allowing different kinds of editing, such as creating Notes, setting B.P.M. values, copying Parts etc. The Song Viewer Pages are opened by pressing the square tabs down the left hand side of the screen. (When a Song Viewer Page is open, the corresponding tab is painted pale blue.) For example, pressing the Arrange button will open the Arrange Editor. (When Prosound is initialised this page is always opened by default.) Pressing the tab with a miniature picture of a keyboard will open the Key Editor Page. These two pages (Arrange and Key Editor) are all we will need to start with.

## Tracks

Stage 1 in the process of writing a song is to set up a Track upon which to record Events. (An Event can be of many types - the most common are Notes). The concept of the Track in any sequencer is very similar to a Track on a tape recorder. It is the place where Events are recorded and stored for playback. The great advantage of a sequencer is that individual notes (or any kind of data for that matter) can be input from a graphic interface and then edited with massive flexibility. Tracks are represented in the Arrange Page in horizontal strips of information divided into the Text Window on the left hand side, and the Graphic Window on the right hand side.

\*\*\* Left Click on the name of a Track in the Text Window to select a Track.

\*\*\* Left Click On the Key Edit tab to open the Key Editor. (You will notice that both Arrange and Key Edit Pages are now open. If you were to Right Click on any of the tabs, the Page you have selected will fill the Song Viewer, and all the other Pages will be shut down.)

At this stage we are ready to input some information. This can be done in one of two ways - by playing Notes on a keyboard or other device (we will assume you are using a keyboard), or by inputting information directly using the Interface. First, we will examine keyboard Recording.

\*\*\* Set up a Midi Channel on the selected Track which will receive information from your keyboard. (Refer to your keyboard manual for details of how to set up a Midi Channel). This is done by Left Clicking on the Midi Channel number for the selected Track which will open up the Value Edit Box. The Box will contain the selected number, from which a keyboard value can be typed in, and a scroll bar for mouse increments. Once the correct number has been input, press



the Update Button, or type Enter. The Midi Channel for the selected Track will be updated.

\*\*\* Press Record. The Metronome will start moving (top right hand of the screen), and you will be given a 2 Bar Count In. The Record Button will change colour to amber. After the Count In the Record Button will change to red and the Song Marker, (a red line in the Graphic Window), will begin to move. This Song Marker will track the current position in the song at which Notes will be input.

\*\*\* Play some notes on your keyboard. After a few seconds, press Stop. The song will stop recording, the Metronome will stop, and the Record Button will go pale.

\*\*\* Press Stop again. This will return the Song Marker to the beginning of the Song.

\*\*\* Press Play. Assuming your Midi connections are correct you will now hear the notes you have just inputted being played back. You have just written the first Part of your Song.

## Parts

Parts sit somewhere between Events and Tracks. The Track will hold all the Events of every kind across the entire Song. Parts are of limited, (although entirely flexible) length, and are used to hold related Events together in a more useable format. The Part you have just recorded will be displayed on the Arrange Page as a rectangular blue block, (black if selected). You will also see the notes appear in the Key Editor Page (assuming they fall within the visible keyboard range down the left hand side of the Key Editor. If you cannot see the Notes, which will be blue rectangles, scroll down the Key Editor until they appear.)

\*\*\* Try pressing Rewind and Fast Forward, and get used to the way the Song Marker can be moved around.

Now we will edit the Notes we have just recorded.

\*\*\* Select the Brush Tool.

\*\*\* Left Click a few times, (in different places), in the Key Editor. This will input new Notes.

\*\*\* Play the Song back again and hear the Notes you have just put in.

\*\*\* Right Click (still with the Brush), on some of the Notes. They will be Deleted.

You will notice that if you click (either Right or Left), and move the mouse pointer around whilst the button is held down, either new Notes will be put in or any Notes you drag over will be erased. This is called Click and Drag and will be referred to regularly in various functions.

\*\*\* Move the cursor into the Arrange Page and Right Click on the Part. It will be deleted.

It is possible to Draw Parts in the Arrange Page in exactly the same way that Notes can be input in the Key Editor. In order to create a Part in the Arrange Page using the Brush you will need to move the Locators to the beginning and end of the Part you want to create. For example, if you wanted to create a Part 4 Bars long, starting from the beginning of the Song, you will need to place the Start Locator at Bar 0 and the End Locator at Bar 4. This is done by Clicking in the top Locator Strip of the Arrange Page where all the Bar Numbers are displayed.

\*\*\* Left Click at Bar 0. The Left Locator (represented by a white box with text displayed inside)

will be updated and repainted.

\*\*\* Right Click at Bar 4. The Right Locator will update similarly.

\*\*\* Left Click (still using the Brush) in the Arrange Page on the selected Track. This will create a new, empty Part, 4 Bars long.

\*\*\* Brush some Events into the Key Editor again.

The Part you are currently working on should be highlighted (i.e. black). If it is not, select the Point and Drag Tool, and Left Click on the Part. This will select it.

\*\*\* Press the Repeat Shortcut Button. A copy of the Part will appear in the Arrange Page, between Bars 4 and 8. The new Part, however, is different in one very important aspect - it is a Child Part.

## Parent Parts and Child Parts

A Child Part is like a mirror image - it appears identical to its Parent but it does not contain any actual Event information itself. Instead it uses the information stored in its Parent Part. This means that if you make a change to the Events in the Parent Part the Events in the Child Part will update also change. This may seem like an odd concept but the reason for having this facility is so that if you have, for example, a 4 Bar Part repeated many times, and you want to edit it, you only need to change the Notes in one Part, (the Parent), and all its Children will be changed automatically.

\*\*\* Try creating and deleting Notes in the first 4 Bars of the Key Editor, (occupied by the Parent Part), and see them appear at corresponding positions in the Child Part. If you delete a Part which has Children attached to it, they will `Mature` into Parents themselves.

If you want to create `Real` copies of the Parts rather than Child Parts you will need to enter the Repeat Dialog Box. This is done by pressing the Repeat Drop Down Button. A radio button selection determines which type of Part will be Created upon execution of the Repeat function, (i.e. Parent or Child).

At this stage you know enough to write a Song. You can create Parts, either Graphically by moving the Locator Bars and Brushing a Part in, or by recording direct from the keyboard. You may also have noticed (if you haven't followed this guide parrot - fashion), that if you input Notes in the Key Editor when no Part exists, one is dynamically created. Its size will be almost arbitrary, since Prosound has no way of knowing how large you want the Part to be, but the important thing is that wherever you Click in the Key Editor, (or any of the other Editors), a Corresponding Part will be created on the selected Track if one doesn't already exist.

**EDIT FUNCTIONS ONLY OPERATE ON THE CURRENTLY SELECTED TRACK.**

## Quantise

Quantise is one of the most important facilities of any sequencer. It allows you to correct the human error factor by moving Events to where they were intended to be played in. For example, if you were to Quantise the start values of all the Notes in a Part to an accuracy of `4` this would mean that the notes would be moved so that each Note's new start position was on a beat, rather than just before or just after the beat.

\*\*\* Record some notes into a Part. Notice that the Notes` start positions are irregular because you almost certainly didn`t play them in with `perfect` accuracy.

\*\*\* Select the Point and Drag Tool.

\*\*\* Draw a rectangle around some of the visible Notes by Left Clicking to the top left and dragging to the bottom right. When you release the mouse button all the Events within the rectangle will be selected.

\*\*\* Press the Quantise Shortcut Button. All the selected Events will move to the closest line. When Prosound first runs the Quantise value (extreme top left corner of the screen) is set to 16. This represents the equivalent of semi - quaver accuracy in Score terms.

\*\*\* Try setting the Quantise value to 8, and Quantise some other Notes. This time the Notes will be moved further, towards `Quaver` accuracy.

There is an Auto Quantise feature, which means that any notes recorded in from a keyboard will be automatically moved towards the nearest Quantise value. Auto Quantise can be set on or off from the Main screen.

## Undo / Redo

Any operation which you Perform in Prosound can be undone. For example, if you record some Events and decide they are wrong, press the Undo button and they will disappear again, along with the Part if it has just been created. If you then press Redo, the Events (and Part if relevant) reappear. The Undo / Redo buffer is dynamic and will hold an unlimited number of operations. In other words, you can step through many operations, removing them one by one.

## Transpose

This is a feature whereby Events are altered by some absolute amount. For example, Transposing all the Notes in a Part by one semitone upwards would change their pitch from C to C#, G to G#, etc. Another example would be to increase the Notes` velocity (i.e. how loud they are played) by 10 units. This would make them all louder.

## Saving your Song

Prosound sequences are saved with .psq extensions.

\*\*\* Press the Save File Drop Down Button between the red and green Disc Buttons, which will open a Dialog Box allowing you to `Save Sequence`. When you restart Prosound this file will be automatically loaded back in.

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## Bar

A Bar is a measure of time in a Song. In Score terms, it denotes the number of Quarter Note (Beat) segments the Song is divided into.

Suppose you had a 4/4 Time Signature. This would mean that there are 4 Beats to every Bar (the Numerator). Every Beat has an absolute Length (384 Ticks), so the Bar will be  $(4 * 384)$  1536 Ticks long.

If you had a 3/4 Time Signature the Bar would be  $(3 * 384)$  1152 Ticks long.

Time Signature changes can only occur at the beginning of a Bar.

## Beat

A Beat is an absolute measurement of time. It is 384 Ticks long.

The number of Beats in a Bar, (set using the Time Signature value) significantly affects the way a Song sounds.

When you tap away to a Song, you are tapping the Beats. Beats denote the `rhythm` of the Song.

## Tick

A Tick is the smallest measurement of time that Prosound can count to. There are 384 Ticks in a Beat. The reason the number 384 is used is so that Notes as small as 64ths can be calculated in integer values. (A 64th is 6 Ticks long.) This allows Notes to be edited very accurately, to values smaller than the ear is capable of differentiating.

## Focus

Each Song Viewer Page which has keyboard commands is capable of having the `Focus`. Focus is denoted by a thick red line around the perimeter of the Page. Whichever Page has Focus will respond to keyboard messages. For example, if the Arrange Page has Focus, and the `Delete` key is pressed, any selected Parts will be deleted. If, however, the Key Editor has Focus when `Delete` is pressed, any selected Notes will be deleted.



## Display Bulb



A Display Bulb is an indicator visible on the Main Screen which shows the `On/Off` status of a function. The following functions have Display Bulbs:-

Sync

Metronome

Solo

Cycle

Auto Quantise

Pressing the Display Bulb will toggle between the function's `On` and `Off` status.

## Song Marker

The Song Marker displays the Song`s current Song Position. It is represented by a single red vertical line in the following Song Viewer Pages:-

Arrange  
Key Editor  
Drum Editor  
Event Editor  
Master Track

When the Song is Recording, Playing, Rewinding, or Fast Forwarding, the Song Marker will move across the screen from left to right. When it comes close to the right hand edge of the screen the Page will update so that the Song Marker is on the left hand side again, and so on.

When Stop is pressed, the Song Marker will stop moving, and the Song will stop playing. When Stop is pressed a second time, the Song will be returned to Song Position 000:01:000 and the Song Marker will be updated accordingly.

## Child Part

A Child Part contains no Events of it's own. The Child Part takes it's Event information from a Parent Part.

Suppose you had Recorded a Part between Bars 0 and 4. If you Repeat this Part, making a Child copy, a new Part will appear between Bars 4 and 8. The first thing you will notice is that the new Part is a different colour - green instead of blue. This denotes it's `Child` status. If you open the Key Editor you will also see new Notes between Bars 4 and 8, and these Notes will also be green. Now, if you make a change to the Parent, you will see the Child Part update to reflect the change. For example, if you deleted a Note in the Parent, the corresponding Note in the Child will disappear.

This allows a `pool` of Event information to be used as a `template` to repeat many times. A Drum Beat is a typical example of this function, where a 4 Bar Drum Beat is Repeated several times. Each time the Parent Drum Part is changed, each instance of it's Children will also be updated.

If a Child Part is individually edited at any time, it will `mature` into a Parent itself. This is because the Child, if it is to remain a Child, must always be identical to it's Parent. By performing an explicit Edit on the Child Part, you are effectively saying that you do not want the Child to be a copy anymore.

Only Parent Parts can be held in the Part Store. Child Parts are not allowed in this Page.

## Parent Part

A Parent Part is a Part which is capable of having Child Parts attached to it. It contains `real` Events, rather than copies.

All Parts that are created in the usual process of Recording will be Parent Parts.

When a Parent Part is first created, it is not really a Parent at all. It simply has the capacity to be a Parent. What this means is that there is no way you can create a Part and immediately have Child Parts connected to it - the Child Parts must be created separately at a later time.

When a Child Part is created, however, you must be careful not to do anything to the Parent Part which may have unwanted side effects. For example, if the Parent is deleted, all it's Children will either be `matured` to become Parent Parts themselves, or else Deleted. They cannot continue in their present form as Children because their Parent has been destroyed.

Only Parent Parts can be held in the Part Store. Child Parts are not allowed in this Page.

## Set Controller

This button allows selection of the 128 available Controller Types (See the [Event](#) description for a list and further description of these Types.) Prosound allows 3 of the 128 available Controller Types to be displayed and controlled with great flexibility. This is ordinarily enough to make use of the more basic Types, such as Modulation, Main Volume, Pan, etc., but when you want to Edit a Controller Type which is not currently selected, you must press this button. A window will appear, containing a Combo Box, a Close button, and 3 other buttons labelled `Set Cont1`, `Set Cont2`, and `Set Cont3`.

Choose an item from the Combo Box, which contains all 128 Controller Types, then assign that Type to one of the 3 `Set...` buttons. Now, each time any window displays the currently selected Controller Types, the new Type will be displayed and can be Edited.

## Shortcut Operates...

This Combo Box allows selection of a Shortcut Operation for various functions. The function to which this facility apply are:-

Delete  
Repeat  
Quantise  
Transpose  
Global

The contents of the Combo Box will tell you to which functions Shortcuts can be assigned.

The Shortcut is activated for each of the above 5 functions by pressing the Picture button rather than the Drop Down button. The Dialog Box will not be opened, but the operation will be performed automatically.

Some functions need to be set up before the Shortcut can be used properly. For example, if you assigned the Repeat Shortcut to `Repeat Part`, then the number of Parts which are created each time Repeat is pressed will be determined by the last setting made in the Repeat Dialog Box.

## Dialog Display

In this group are 2 Radio Buttons:-

### Close After

When this Radio button is selected, any action which is executed in a Dialog Box will cause the Dialog Box to be shut down automatically. This allows Dialog Boxes to be as unobtrusive as possible, because it does not have to be explicitly closed every time an action is performed.

### Hang Around

This Radio button is the opposite to `Close After`.

Suppose you are in the Quantise Dialog Box, and you want to try various Length settings for selected Notes. By choosing `Close After`, when you press the `Nearest Length` button the Dialog Box will stay on screen. So, if you want to perform another Quantise operation immediately afterwards, you do not have to re-enter the Dialog Box every time.

## Save Sequence



This button saves the entire Sequence, including all default settings, with the last File Name used. If, for example, you are working on a Song called `Blues.psq` and you press this button, the current Sequence will be saved using this name. There is no confirmation box for this function unless you attempt to overwrite Prosound.psq, (the Default Set Up File). It therefore allows a very quick saving facility to reduce the possibility of Information loss should the computer crash.



## Midi Channel

A Midi Channel is just like a T.V. channel. If you wanted to watch Channel 4, you would tune the T.V. in so that it received Channel 4's frequency. By setting a Midi Channel you are telling the computer and any external devices, such as a keyboard, which sound you want to use.

Suppose you have 2 keyboards, one of which is used for melody sounds such as Piano and Strings, the other being used for Drum Sounds, you will want to tell Prosound which keyboard to send Note information to. In the Arrange Page, set the Midi Channel strips up so that each Track sends information out (and receives it) on a different Midi Channel, then when you play the Song, some Notes will be played on one keyboard (say Channels 1 to 8), and other Notes will be played on the other instrument (Channels 9 to 16).

If a Midi Channel is changed when there is already information in that Track, any Notes on that Track will be diverted to the new Midi Channel, and may end up being played on a completely different instrument.

## Tool Box

The Tool Box contains all 11 Editor Tools. It is accessed by either Clicking the Middle mouse button (if you have one) or pressing `x`. When the Tool Box is open, any one of the 11 Tools can be selected for use in the Song Viewer.

When using the mouse, keep the Middle button pressed, and move the cursor over the desired Tool. When you release the button the Tool will be selected. (Note that if that Tool is not available in the Page over which you are currently positioned then you will see the cursor as the standard `Arrow`, but if you move the cursor over any Page to which the selection does apply you will see that the Tool has indeed been selected.)

If you access the Tool Box via an `x` key press, use the 4 direction keys to move the cursor around the Tool Box. When you have selected the desired Tool, press the `x` key again to shut the Tool Box down and select the Tool.

## Numerator (Time Signature)

The Numerator is the top number of a Time Signature value. For example, if you had a 7/8 Time Signature, the Numerator would be 7 and the Denominator would be 8.

The Numerator denotes how many Beats are in the Bar at the relevant Song Position.

## Denominator (Time Signature)

The Denominator is the bottom number of a Time Signature value. For example, if you had a 7/8 Time Signature, the Numerator would be 7 and the Denominator would be 8.

The Denominator denotes which `Quarter Note` value the Time Signature will have. For practical Sequencing purposes this value can often be ignored because it does not affect the Editing of information in any way at all.

## Value Edit Box

The Value Edit Box is used for updating values in the [Song Viewer](#).

If you can see a number or value in the Song Viewer, (for example the [Midi Channel](#) number in the [Arrange Page](#)) then the odds are that the number can be changed in some way. (Some numbers are for display purposes only - refer to the [Song Viewer](#) Page descriptions for further details.)

The Value Edit Box is opened by Left Clicking on the value to change. The Box that appears contains a text strip at the top with the value inside it. You can type a value directly into this box. Below is the Update button, which confirms the value and makes the change. (Clicking anywhere outside the Value Edit Box will also perform the `Update` operation.) Below the Update button is the Cancel button, which is self-explanatory. Below this is a scroll Bar which contains the range the Value may have.

For example, suppose you Clicked in the [Midi Channel](#) area described above. The Value Edit Box would appear with, say, the number 4 in it, representing Midi Channel 4. If you scroll to the left, the number will decrease until it reaches 1, (the first Midi Channel). Scrolling up will reveal a limit of 16 (the highest Midi Channel). Pressing in the bar of the scroll bar, rather the arrow, will set the value immediately to either 1 or 16. Press Update (or outside the Box) and the [Track's](#) Midi Channel will change.

## Velocity

Velocity describes how hard a Note is hit. It differs from Midi Volume, which puts a volume limit on all Events passing to or from an instrument. i.e., It only affects individual Notes. (You cannot have a Velocity value without a corresponding Note - it means nothing in itself).

Velocities are displayed in the Event Editor as vertical red bars. The height of the bar denotes how much Velocity the Note has (i.e. how hard the key has been hit).

## Triplet

A Triplet is a Note  $\frac{2}{3}$  the size of an untripletted Note. For example, if you had 2 Notes each 96 Ticks long, you could describe them as being 16ths (if you are in  $\frac{4}{4}$  Time Signature). If you inserted 16th Triplets into the same Part they would have a length of 64 Ticks each (i.e.  $96 \times \frac{2}{3}$ ). This would mean that you could fit 3 of these Notes into the same space as 2 16th Notes.

Triplets are often used when creating a drum roll. It makes the Notes `roll` into each other, creating an effective combination with other `standard` time Notes. It is also often used to create a `swing` feel in a Song.

## Dynamic Glueing

When Child Parts are inserted into the Arrange Page using the Block Editor, it is possible to create them a Bar (or even a Beat) at a time. However, if you Drag across the Grid from left to right, you would end up with lots of 1 Bar (or Beat) Parts which would then have to be glued together so that they looked like their Parent Part. With dynamic glueing this is not the case.

If Prosound finds that 2 Child Parts are sat together, and the End of the first Part is touching the beginning of the next Part, it will automatically glue the 2 Parts together so that they form 1 Part, 2 Bars (or Beats) long. This means that Child Parts cannot be cut up - they would be instantly glued back together.



## Last Song Position

Every Prosound Sequence has an `End` point. The main use of this facility is when scrolling Song Viewer Pages horizontally. The range of the horizontal scroll bar in the Arrange, Key Editor, Drum Editor, Event Editor, and Master Track Pages, will be the number of Bars in the Song upto the `End` point. Therefore, by dragging the scroll bar's thumb to the far right you would set the Song Position and Song Marker to the End of the Song.

It is important to note that this facility in no way prevents insertion of Events after the Last Song Position. It is there for user convenience only.

If you want to forward the Song beyond it's Last Song Position, simply press the scroll bar's right arrow, or alternatively update the Song Position value at the top of the Main Screen.

The Last Song Position is displayed in the Song Viewer's Status Bar.

## Play



Pressing this button begins the Sequence's playback from the current Song Position. The Song Marker will begin moving from left to right in the Song Viewer Pages listed below:-

Arrange  
Key Editor  
Drum Editor  
Event Editor  
Master Track

Pressing Play whilst in Record mode will take the Sequencer out of Record mode and into Playback mode.

## Stop



Pressing this button causes the Song to Stop Playing. Pressing this button a second time will cause the Song Position and Song Marker to return the Start Locator value, if it is before the current Song Position. Otherwise, (and always in the event of a third press), the Song will return to 000:01:000.

## Resize



This Tool operates in the Arrange and Key Editor Pages only. It resizes the beginning and end of a Part or Note. In order for this function to work you must click directly on a Part/Note.

### Arrange Left Click

This function resizes the beginning of a Part.

When you Left Click on a Part, the cursor will change shape to show that a Dragging operation is being performed. If you move the cursor to either the left or right, and release the button, the Part's Start Position will be moved to the cursor position. For example, if you Click on a Part which starts at Song Position 008:01:000, and drag 4 Bars to the left then release, the Part will be made 4 Bars longer.

It is not possible to resize a Part so that it's Start is after it's End value. If you try to do this the operation will fail.

### Arrange Right Click

This function resizes the end of a Part. It operates in exactly the same way as the Left Tool described above.

It is not possible to resize a Part so that it's End is before it's Start value.

### Key Editor Left Click

This function resizes the Note On position of a Note. In other words, the Note will effectively be moved either forwards or backwards in time. The End position, however, will remain unaffected.

As above, it is not possible to resize a Note so that it's Start is after it's End value.

### Key Editor Right Click

This function resizes the Length of a Note. It's Note On position will not be affected.

As above, it is not possible to resize a Note so that it's End is before it's Start value.

## Rename

This is where text is updated in the Song Viewer. Suppose you have a Part called `Part 1`. This is not very descriptive. You may wish to call it `Piano intro`. Select the Part, and press the escape key. A Dialog Box will appear over the Part, with the name of the Part in it. Simply type the new name in, and press Enter.

Note that this is the only function in Prosound which, under some circumstances, cannot be performed using the graphical user interface. This is because other, more useful functions, have been assigned to Left, Middle, and Right buttons. These situations are: Arrange Page Part Renaming, and Part Store Part Renaming

## Block Editor



The Block Edit paints a grid over the Arrange Page. This Grid allows Child Parts to be copied from the Part Store to the Arrange Page.

The Grid is painted in white and grey lines. White lines represent the beginning and end of the selected Parts in the Part Store. If, for example, you had selected a Part in the Part store 4 Bars long, the white lines in the Arrange Page would be painted every 4 Bars. Inside these white lines are drawn the grey lines. These represent Bar or Beat divisions, depending on whether the Snap value is `On` or `Off`.

Left Clicking in any of the Blocks which are created by these lines will insert a Child Part into the Block. Which information will be copied into this Part will depend on how the Part in the Part Store has been selected. (For further information on selecting Parts in the Part Store, see the Point and Drag topic. This topic will also provide an explanation, under the `Block Editor` section, of how to Paste Parts into the Page.)

# Recording and Playing a Song

(from `Getting Started` help topic)

Stage 1 in the process of writing a song is to set up a Track upon which to record Events. (An Event can be of many types - the most common are Notes). The concept of the Track in any sequencer is very similar to a Track on a tape recorder. It is the place where Events are recorded and stored for playback. The great advantage of a sequencer is that individual notes (or any kind of data for that matter) can be input from a graphic interface and then edited with massive flexibility. Tracks are represented in the Arrange Page in horizontal strips of information divided into the Text Window on the left hand side, and the Graphic Window on the right hand side.

\*\*\* Left Click on the name of a Track in the Text Window to select a Track.

\*\*\* Left Click On the Key Edit tab to open the Key Editor. (You will notice that both Arrange and Key Edit Pages are now open. If you were to Right Click on any of the tabs, the Page you have selected will fill the Song Viewer, and all the other Pages will be shut down.)

At this stage we are ready to input some information. This can be done in one of two ways - by playing Notes on a keyboard or other device (we will assume you are using a keyboard), or by inputting information directly using the Interface. First, we will examine keyboard Recording.

\*\*\* Set up a Midi Channel on the selected Track which will receive information from your keyboard. (Refer to your keyboard manual for details of how to set up a Midi Channel). This is done by Left Clicking on the Midi Channel number for the selected Track which will open up a Dialog Box. The Box will contain the selected number, from which a keyboard value can be typed in, and a scroll bar for mouse increments. Once the correct number has been input, press the Update Button, or type Enter. The Midi Channel for the selected Track will be updated.

\*\*\* Press Record. The Metronome will start moving (top right hand of the screen), and you will be given a 2 Bar Count In. The Record Button will change colour to amber. After the Count In the Record Button will change to red and the Song Marker, (a red line in the Graphic Window), will begin to move. This Song Marker will track the current position in the song at which Notes will be input.

\*\*\* Play some notes on your keyboard. After a few seconds, press Stop. The song will stop recording, the Metronome will stop, and the Record Button will go pale.

\*\*\* Press Stop again. This will return the Song Marker to the beginning of the Song.

\*\*\* Press Play. Assuming your Midi connections are correct you will now hear the notes you have just inputted being played back. You have just written the first Part of your Song.

## Part Store



The Part Store is a place where Parts can be stored away from the main Arrange Page. Parts in the Part Store will not be played, and cannot be edited. It is used purely for storage. However, the power of the Part Store lies in the fact that Parts can be copied from it, into the Arrange Page, with ultimate flexibility. The following Tools are available in the Part Store:-

Point And Drag  
Move  
Brush (Right Click only)  
Zoom

Parts are stored in the Part Store at a zero base, which means that Parts stored in there have no concept of Song Position. The Parts are effectively `templates` which are used to Paste information into the Arrange Page.

In order to place a Part in the Part Store, select it in the Arrange Page. (As many Parts can be copied at once as you like.) Then press one of the arrows down the left hand side of the Page titled `Capture`. This will move the Part from the Arrange Page into the Part Store. (Note that Child Parts cannot be copied into the Part Store). The Part will be painted red to show that it is selected.

In order to return a Part from the Part Store to the Arrange Page, you must `Dispatch` it. To Dispatch a Part, the Arrange Page must be open. Dispatching is accomplished by selecting the Part to be moved, in the Part Store, then pressing the Dispatch button. The cursor will be thrown into the Arrange Page, and will be Clipped there (i.e. you cannot leave the Page). Now, when you Left Click in the Arrange Page, the Part will be inserted at the mouse position.

Each line in the Part Store has it`s own description, which can be changed by Right Clicking in the Description section. By default, this is the same as the Track from which the Part was transferred.

The value in the extreme top left hand corner of the Page is titled `Grid Offset`. This value shifts the Grid in the Block Editor forwards by the number of Beats this number represents. For example, if this value was set to 2, the Grid in the Block Edit Page would start at Song Position 000:03:000 rather than 000:01:000. Each segment of the Block Grid will be shifted 2 Beats to the right.



## Drum Editor



The Drum Editor performs a very similar function to the Key Editor. That is, it is used to display Notes, (and no other kind of Event). The Drum Editor is not as flexible as the Key Editor for inputting and Editing Notes, but it has other advantages.

The most significant difference is that individual Notes in the Drum Editor are treated separately, rather than as one whole keyboard. 3 different parameters can be assigned to each Note in the Drum Editor; Drum Name, Length and Velocity. When any new Notes are inserted into the Page using the Editor Tools, the Notes will be given default Length and Velocity values obtained from these values. They can be changed at any time, any they will not return to their default values until you specifically make it so. The Drum Name element allows Drum Machine names to be assigned to the Keys so that you can easily see which Drum sound will be played at that position.

Drum Notes do not ordinarily have a concept of `Length`, because they are just a `hit`. The Drum Editor, therefore, allows you to set a Note`s Length to 0, which means that no Note Off message will be sent. This can help to ease Midi Traffic flow to the keyboard thus reducing the risk of a `Traffic Jam` in which Notes may be lost. Because Lengths are less important in the Drum Editor, Notes are represented as diamonds rather than horizontal rectangles. Click on the diamond to select the Note.

The greyed text in the `key` field is for display purposes only, and corresponds to the Key Value of a Note relative to an external instrument.

The following Tools can be used in the Drum Editor:-

- Point and Drag
- Brush
- Quantise Single
- Zoom
- Hear Notes

## Instrument Map



The Instrument Map allows each Track to be assigned a Name. This Name will describe the sound which will be produced when the Track is played back.

Suppose you had 2 Keyboards connected via Midi leads to the computer. The first Keyboard is assigned Midi Channels 1 to 8, and the second keyboard, Midi Channels 9 to 16. Instead of having to remember which sounds will be produced on each Track, you can define 2 Instrument Maps, one for each Instrument, which will list every sound in the Keyboard.

The first step is to create a new Instrument Map. This is done by pressing the `New` button on the left hand side of the Dialog Box in the `Instrument Map` group of functions. You will be asked to choose the name of the new Map, (usually the name of your Keyboard). Once this has been done, you will need to define the contents of the Map. This has 3 elements:-

Name  
Bank  
Patch

The Name is simply what will appear in the `Instrument` section of the Arrange Page. It serves only to provide a Description of the Instrument Map.

### Banks

A Bank is a Collection of Patches (see below). When an Instrument Map is first created, it is assigned just one Bank, and each Patch in the Bank will be given a Number from 1 to 128. If your Keyboard has more than one Bank of sounds, it will be necessary to create a new bank by pressing the `New` button in the `Bank` group of functions. Again, each Bank will default to numbers 1 to 128.

Banks can be easily Deleted, by pressing the `Delete` button. The currently selected Bank is the one which will be Deleted.

### Patches

When you have created the desired number of Banks for your Keyboard you will need to type a description of each Instrument Sound into the List Box on the right hand side of the Dialog Box. Click in the first item of the List Box, and you will see the Number of the Patch appear in an Edit Box underneath. Type the new Name of the Patch in this Box, and type `Enter`. The Patch name will be updated and the List Box selection will change to the next item. In this way you can easily enter all 128 Patch Names.

Now, select a new Bank from the Selection Box, and repeat the procedure for each Bank.

When all that has been done, you have a fully defined Instrument Map. Press `Save`, and the changes will be saved to disk.

## Song Time

A Song is usually edited in terms of Bars, Beats, and Ticks. It is also very useful, for obvious reasons, to know how long the Song is, and what any particular Song Position value means in `Real` time. Time is counted in Hours, Minutes, Seconds, and Frames. A Frame is a Segment of a Second, and usually has a value of 24 or 30. Frames are only really useful when Synchronising to an external Tape Machine or similar device. Your Sync Box will determine the Frame value.

The Status Bar contains the length of the entire Song. The end of the last Part in the Sequence will have a white line against it in the Arrange Page, and you will see this line update each time the Song gets longer or shorter.

A time value can be typed in in the Edit Box at the top of the Main Screen. When you type `Enter` the Song will jump to this point. Time can also be incremented one unit at a time (Hours, Minutes, Seconds or Frames), by clicking the Up and Down arrows to the right of the Edit Box.

## Time Signature

Time Signature determines how many Beats are in each Bar, and what the value of each Beat, in Score terms, will be. The Left, or Top, number is called the Numerator, and the Bottom number is called the Denominator.

Time Signatures are inserted and Edited in the Master Track Page.

The Time Signature appearing in the Edit Box at the top of the Main Screen is the current Time Signature, i.e., it is dependant on the Song Position.

## **SMPTE Time**

This value, located at the top right hand side of the Master Screen, displays the current time according to your external Synchronisation unit. This value may bear no resemblance to the sequence's actual time, since the Sync stripe may be several minutes on before you want the sequence to start. This value cannot be changed manually on screen. This is because this time is entirely dependant on an external device telling it what the time is.

SMPTE offset can be set in the Sync Dialog Box.

## Midi



Midi stand for `Musical Instrument Digital Interface`. This is a protocol which allows musical instruments of different types and models to `talk` a universal language. The majority of the Midi Dialog Box is dominated by 2 List Boxes, which contain all the devices you computer is connected to. If, for example, you have a sound card, it's name should appear in both the `In` and `Out` List Boxes. If you select this entry, all Midi information will be routed to your sound card, which usually has the facility to connect to a Keyboard via a Midi cable.

When Prosound shuts down, these settings (i.e. the In and Out selections) will be saved in Prosound's .ini file regardless of whether you saved the current sequence. It will not, therefore, be necessary to reassign these settings again until there is a change in the hardware setup of your computer.

If you have no Midi capabilities on your machine, these 2 Edit Boxes will be empty. In these circumstances you will not be able to hear any music Prosound might play. (When you run Prosound and the Midi In and Out devices are first set, you may receive error messages telling you that the device number is out of range. This is the place where you check if you machine has any valid Midi devices.)

### Midi Thru On

When Midi Thru is turned on, any information which Prosound receives via it's `In` Port will be sent back out again from it's `Out` Port. This is used when a keyboard's internal sounds are turned off, but you want to hear the notes being played back. Any note played on the Keyboard will enter the computer at it's Midi In Port, and bounce straight back out again through it's Out Port. The Note will enter the Keyboard's Midi In Port, and be played. If Midi Thru is disabled, and you choose instead to turn the Keyboard's `Local` setting On, Notes will be played directly from the keyboard rather than in the Midi chain. It is recommended, and standard practice, to disable a keyboard's Local setting, and use Midi Thru instead. This way, all information produced by the keyboard is processed by Prosound.

### Active Sensing On

Active Sensing is a Midi facility which puts your keyboard or other device into an `active` state. Prosound will send messages every 250 milliseconds to your instrument which says that if no Midi information is received within that interval, all Notes will be turned off. This is very useful for preventing `hanging` Notes because they will be automatically turned off if there are no Notes pressed.

## Synchronisation



Synchronisation is used when you want to use Prosound in conjunction with an external tape machine. It allows the Sequence to be locked to the tape machine so that both devices play together.

Suppose you were recording a song which was about 4 minutes long and, as well as playing music on the computer, you also wanted to record a couple of guitar lines. Ordinarily you would have no way of making the tape machine play in Sync with Prosound. You would have to press `play` on the tape machine at exactly the same time as you pressed Play on the computer. There will always be some amount of inaccuracy, and the keyboard and guitar tracks will be out of time. By using Synchronisation you can record a `stripe` of time information on the tape machine which will trigger Prosound and make it play back at exactly the right time.

To use this function you must have an external sync device, usually called a `Sync Box`. This is used to record the `stripe` onto the tape machine which will control subsequent play back. If you have such a device, refer to the instruction manual for details of how to record this `stripe`.

If you are in Sync mode, you will not be able to Record any information without pressing play on the tape machine. In other words Prosound is absolutely dependant on the tape machine to tell it what time it is at. Note that play back is not affected at all - i.e. if you stop the tape machine and press Play on the computer, the sequence will actually play, you just won't be able to record anything from the keyboard. If you want to Record information without having the tape machine playing as well, you will need to temporarily disable Sync.

## SMPTE Read Offset

This Edit Box allows you to specify an offset in relation to the Sync stripe on tape.

Suppose you had recorded a long stripe on the tape machine (say 20 minutes), but the song only actually begins 10 minutes into the stripe. In this case you would not want Prosound to read the absolute time signal on the `stripe`, you would want to offset the sequence by 10 minutes so that Sync time 10 minutes equals 0 minutes in Prosound. If the song begins more or less at the beginning of the `stripe` then this function is not needed.

Changing this value will affect the SMPTE Time as displayed on the Main Screen.

## Midi Format Files

Every sequencing program has it's own way of saving sequence files. For example, the Part Store and Drum Map pages are unique to Prosound, and will not mean anything to any other program. It would, therefore, be impossible to transfer this information to any other sequencer.

Having said this, there is a lot of information which is universal to every program. Track structures, B.P.M., Events and Time Signature information are all supported. Track names and other descriptive information, such as Midi Channels, may be stored with the MIDI data. So, if you have a collection of Songs recorded using your old sequencer, it is possible to save these files in Midi format, then load them into Prosound where they can then be edited further.

It is important to remember that Midi Format files do not save all sequence information. Only the Events and other standard settings will be saved - Preference options and other `Prosound specific` data will not be stored in this Format.





