

# **OctaMED**

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	<i>TITLE :</i> OctaMED		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
WRITTEN BY	Ed Wiles	August 7, 2022	

<b>REVISION HISTORY</b>
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NUMBER	DATE	DESCRIPTION	NAME

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# Chapter 1

## OctaMED

### 1.1 Instruments [Sample editor] / Waveform Display

HOW TO...

Draw the sample in pixels

Edit the waveform with the mouse

OVERVIEW

The black squiggly line in the middle of the sample editor is the sample's 'waveform', a graphical representation of the sample. The area which displays this waveform is called the 'waveform display'.

The horizontal line in the middle of the waveform display, usually white, marks zero (no) volume. The further away is a point on the waveform from the zero volume line, the louder its volume. So when the waveform hits the very top or bottom of the display, the sample is at its loudest. Right in the centre, the sample is silent.

There are many types of waveform. Some are made of repeating patterns; most musical instruments have such waveforms, including pianos and flutes. Others, like speech, are unpredictable, sharp and messy. More contrived ones are perfectly curved or are drawn on only the display's extremes.

Usually, the waveform is drawn as many points connected by straight lines. Optionally, the lines can be removed, leaving just the points (or 'pixels'). In this mode, the waveform can be edited - redrawn, even - using the mouse.

### 1.2 Waveform Display / How To Draw The Sample In Pixels

HOW TO DRAW THE SAMPLE IN PIXELS

INTRODUCTION

The points on the waveform display are usually connected by straight lines. Optionally, the lines can be removed, leaving only the points (or 'pixels'). The density of the pixels can be altered.

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This display method is used when drawing freehand. The method is automatically selected when freehand mode is selected.

#### STEPS

- 1) Open the Sample Editor.
  - > Display menu -> Sample Editor OR
  - > Main Control window -> Edit button (if the current sample is not a synthsound) More
- 2) In the sample editor, open the SampleEd Disp Settings window.
  - > Settings menu -> Display Settings
- 3) Turn on pixel mode.
  - > Switch the Display Type cycle gadget from Line to Pixel
- 4) If desired, set the pixel density.
  - > Adjust the Pixel Density slider

#### NOTES

- \* The pixel density is in fact the number of pixels displayed in every horizontal pixel position. On slow machines (like my A500), the display can take ages to redraw with high densities. To watch the pixels being drawn, turn Fast Graphics off. More

## 1.3 Waveform Display / How To Edit The Waveform With The Mouse

### HOW TO EDIT THE WAVEFORM WITH THE MOUSE

#### INTRODUCTION

In 'freehand mode', the sample's waveform can be changed by drawing directly on to the waveform using the mouse.

This can remove obvious defects from the sample; for example, the sample may have a sudden and uncharacteristic peak - use freehand mode to smooth it out.

The waveform must be greatly magnified in freehand mode. OctaMED automatically sets the display size to 596 bytes, but you may zoom in closer if necessary (for accurate editing, this is recommended).

#### STEPS

- 1) Zoom into the part of the waveform that you'd like to edit.
  - How?
  - 2) Switch on freehand mode.
    - > Switch on Freehand (bottom-left)
- 3) Draw directly on to the waveform.
  - > Holding down the left mouse button, move the mouse over the waveform

## 1.4 Instruments [Sample editor] / Zooming In And Out

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HOW TO...

Magnify or reduce the waveform

Use the zoom slider

Restore the waveform to full size

OVERVIEW

Magnifying and reducing the waveform, or 'zooming in and out', allows you to see part of the waveform in more detail. It also makes for more accurate range marking and loop positioning.

There are two main ways of zooming in and out: Use the Zoom In and Zoom Out buttons, or use the handy zoom slider to the right of the waveform. You may also magnify a particular part of the sample.

Once magnified, you can move around the sample. When you've had enough, restore the waveform to full size with a single click.

## 1.5 Zooming In and Out / How To Magnify Or Reduce The Waveform

HOW TO MAGNIFY OR REDUCE THE WAVEFORM

INTRODUCTION

There are two main ways of zooming in and out: Use the Zoom In and Zoom Out buttons, or use the handy zoom slider to the right of the waveform. Alternatively, magnify a particular part of the sample: a marked range or the sample's loop.

Once magnified, you can move around the sample using the scroll bar below the waveform or the <left> and <right> arrow keys.

The 'Display:' box at the top-left corner shows the number of bytes currently being displayed. If there is no magnification (that is, the waveform is at full size), Display: and Buffer are equal.

STEPS

1) EITHER Use the two zooming buttons.

> Click Zoom In or Zoom Out

OR Use the zoom slider.

> Adjust the vertical scroll bar along the right-hand side

How?

OR Magnify a range.

> Mark a range THEN

How?

> Click Show (bottom-left)

OR Magnify the sample's loop.

> If necessary, set a loop THEN

How?

> Loop menu -> Show Loop

2) Move around the waveform.

> Adjust the horizontal scroll bar below the waveform OR

> Press <left> or <right>

## NOTES

- \* The Play Display button (bottom-left) plays the currently displayed part of the waveform at the current pitch. More

## 1.6 Zooming In and Out / How To Use The Zoom Slider

## HOW TO USE THE ZOOM SLIDER

## INTRODUCTION

The zoom slider is a handy way of magnifying or reducing the waveform. Drag the slider upwards to magnify, downwards to reduce. More

Usually, dragging the slider upwards gradually moves towards the middle of the waveform. It can be very useful, however, to move towards a different point. The how-to shows you how to do this.

## STEPS

- 1) In the sample editor, open the SampleEd Disp Settings window.
  - > Settings menu -> Display Settings
- 2) Switch on zooming towards any point.
  - > Switch on Center Zoom Slide on Range
- 3) Close the window.
  - > Click Exit
- 4) Select a point towards which the zoom slider should magnify.
  - > Click anywhere on the waveform display.
- 5) Magnify the waveform.
  - > Drag the zoom slider upwards

## NOTES

- \* As you may have guessed, the zoom slider actually centres the magnification on the middle of the marked range. Clicking on the waveform display just marks a one-byte range.
- \* Also in the SampleEd Disp Settings window, Minimum Zoom contains the number of bytes displayed at full magnification. When the zoom slider is right at the top, the Display: box (top-left) More  
contains the Minimum Zoom value.

## 1.7 Zooming In and Out / How To Restore The Waveform To Full Size

## HOW TO RESTORE THE WAVEFORM TO FULL SIZE

## INTRODUCTION

When you've finished with waveform magnification, there's a very easy way to show the whole of the sample.

## STEPS

1) Click Show All (bottom-left)

## 1.8 Instruments [Sample editor] / Marking a range

HOW TO...

Mark a range with the mouse

Adjust an existing range with the mouse

Mark a range precisely

Mark a range automatically

OVERVIEW

The ability to mark a 'range' is very important in OctaMED. Many operations act on the currently marked range: Cut/Copy/Paste, most effects and many other editing tools.

The range is a rectangular area of the waveform, which usually appears in white. Usually, a range is marked by dragging the mouse over the waveform display. Alternatively, click on the waveform display to mark a one-byte range. There is always a range marked; if you can't immediately see it, it's probably over the very first byte in the sample (number 0).

The starting and ending position of the range, in bytes, is shown along the top row in the Range Start and Range End boxes.

Editing operations, including effects, act on the whole sample if the range is 1 byte long.

ALSO SEE

How To Play An Instrument In The Sample Editor

## 1.9 Marking a range / How To Mark A Range With The Mouse

HOW TO MARK A RANGE WITH THE MOUSE

INTRODUCTION

A range is usually marked with the mouse. This simply involves moving the mouse across the waveform display, while holding down the left mouse button. Alternatively, click on the waveform display to mark a one-byte range.

The starting and ending position of the range, in bytes, is shown along the top row in the Range Start and Range End boxes. These numbers change as you drag the mouse.

STEPS

- 1) EITHER Mark a range of more than one byte.
  - > Holding down the left mouse button, drag the mouse over part of the waveform

OR Mark a range one byte long.  
> Click anywhere on the waveform display

#### NOTES

\* To mark a range more accurately, magnify the waveform.

How?

\* To mark to an extreme, drag from the other end to the extreme.

For example, to mark from the very start of the sample to a particular point, drag from the point to the very start (not the other way round). Similarly for the very end.

## 1.10 Marking a range / How To Adjust An Existing Range With The Mouse

### HOW TO ADJUST AN EXISTING RANGE WITH THE MOUSE

#### INTRODUCTION

Once marked, the dimensions of a range can be adjusted by dragging the mouse with the Shift key held down.

#### STEPS

- 1) Throughout this how-to, keep holding down a Shift key!
- 2) Choose to adjust the range's start or the range's end.
  - > Range's start: Click on an area to the left of the range
  - > Range's end: Click on an area to the right of the range
- 3) Adjust the existing range.
  - > Holding down the left mouse button, move the mouse as required
- 4) Release the mouse button and Shift key.

#### TIPS

\* As a consequence of this feature, one way to mark a range is to click on the range's start, then shift-click on the range's end.

## 1.11 Marking a range / How To Mark A Range Precisely

### HOW TO MARK A RANGE PRECISELY

#### INTRODUCTION

There are two ways to mark an exact range: Enter values directly into the Range Start and End boxes, or sufficiently magnify the waveform to obtain the required degree of accuracy.

#### STEPS

- 1) EITHER Enter range start and end values directly.
  - > Type a value into Range Start (top-right) THEN
  - > Type a value into Range End (top-right)

OR Zoom in, then mark a range.

a) Zoom in.

How?

b) Mark a range.

How?

## 1.12 Marking a range / How To Mark A Range Automatically

### HOW TO MARK A RANGE AUTOMATICALLY

#### INTRODUCTION

OctaMED can mark two types of range for you. A range can be marked over the whole of the current display, or over the sample's loop. More

Remember that the current display is *\*not\** the whole sample, unless the waveform is not magnified. To mark a range over the whole sample, first restore the waveform to full size.

How?

#### STEPS

1) EITHER Mark a range over the current display.

> Click Range Display (middle)

OR Mark a range over the sample's loop.

> Loop menu -> Range = Loop

## 1.13 Instruments [Sample editor] / Rearrangement and Removal

### HOW TO...

Move or copy an area

Remove, clear or 'chop' an area

Remove a predefined area

#### OVERVIEW

The sample editor's most fundamental editing operations are the wordprocessor-like 'cut', 'copy' and 'paste'. Just like the equivalent Tracker editor operations, these use a 'copy buffer' to temporarily store a part of the sample.

Sections of the sample can be moved or copied to another place at will.

Sections can also be removed or cleared, or 'chopped' (all parts of the sample are removed, except for the marked section).

## 1.14 Rearrangement and Removal / How To Move Or Copy An Area

### HOW TO MOVE OR COPY AN AREA

#### INTRODUCTION

Moving or copying an area of the sample is quite simple. Mark a range over the area; click Cut or Copy; click on the position to insert the area; click Paste.

Cut and Copy move or copy the range to the 'copy buffer', while Paste inserts the copy buffer's contents at the marked position. So the area travels via the copy buffer to its destination.

#### STEPS

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- 1) Mark a range over the area to be moved or copied.  
How?
  - 2) Choose to move or copy the range.
    - > Click Cut or select Edit menu -> Cut [to move] OR
    - > Click Copy or select Edit menu -> Copy [to copy]
- 3) Set the position to move or copy the area to.
  - > Click anywhere on the waveform display
- 4) Move or copy the area.
  - > Click Paste

#### NOTES

- \* Paste inserts the copy buffer at the marked position. As a result, the sample's size increases by the length of the copy buffer, but the display size remains the same. To show the whole More of the new sample, click Show All (bottom-left).
- \* Instead of inserting the copy buffer's contents, you can overwrite part of the sample with the copy buffer. This doesn't increase the sample's size. To do this, select Edit menu -> Paste (Overwrite) in step 4 above.

## 1.15 Rearrangement and Removal / Removing, Clearing, 'Chopping'

### HOW TO REMOVE, CLEAR OR 'CHOP' AN AREA

#### INTRODUCTION

Removing or clearing an area is as simple as marking a range over the area and clicking Erase or Clear. 'Chopping' an area removes the whole sample \*except\* the marked range, so that only the desired area is left.

#### STEPS

- 1) Mark a range over the area to be removed, cleared or chopped.  
How?
  - 2) EITHER Remove the area.
    - > Click Erase (bottom-middle) or select Edit menu -> Erase
  - OR Clear the area.
    - > Click Clear (bottom-middle) or select Edit menu -> Clear
  - OR 'Chop' the area.
    - > Select Edit menu -> Chop

### HOW TO REMOVE A PREDEFINED AREA

#### INTRODUCTION

One way of removing an area is to mark a range over it and click Erase. However, several commonly-removed areas are available through the sample editor's menus. You can erase from any point on the waveform to the start or end of the sample, or erase the part of the sample before the 'loop'.

Two further operations 'trim' unneeded parts of the sample, to save

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memory and keep timing in songs precise. Remove Unused Space removes empty space (of zero or very little volume) on either end of the waveform. Erase After Loop removes the part of the sample after the loop. Think about it: you'll never hear this part!

Also, some of the end of the sample can be removed by changing the sample's size to a specific value. For example, if the sample's size is 20000 bytes, setting it to 5000 bytes removes the last 15000 bytes from the sample.

#### STEPS

EITHER Erase to the start or end of the sample.

- 1) Choose a point on the waveform.
  - > Click anywhere on the waveform
- 2) Remove the area from that point to the sample's start or end.
  - > Edit menu -> Erase To Start OR
  - > Edit menu -> Erase To End

OR Remove the part of the sample before the loop.

- 1) Go for it!
  - > Edit menu -> Erase Before Loop

OR Trim unneeded parts of the sample.

- 1) Remove any unused space from either end of the sample.
  - > Edit menu -> Remove Unused Space
- 2) Remove the part of the sample after the sample's loop.
  - > Loop menu -> Erase After Loop

OR Set the sample to a particular size, which may or may not remove part of the sample.

- 1) Set the sample's size.
  - > Type a new number into Buffer (top row)
- 2) Keep the start of the sample; don't clear it.
  - > Click Retain in the requester

## 1.16 Instruments [Sample editor] / Adding Effects

HOW TO...

Change the volume of an area  
<- Change Volume

'Retune' the sample  
<- Change Pitch

Mix two samples together  
<- Mix

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```
Muffle or brighten the sample
<- Filter/Boost

    Add echo to the sample
<- Echo

    Add white noise to an area
<- Create Noise

    Turn the sample into a chord
<- Create Chord

    Turn a sample or area backwards
Effect>>
    Centralise the sample
aids>>
    Add 'workspace' to the sample
OVERVIEW
```

The sample editor's Effects menu really gives you the chance to play with your sample. An area's volume can be changed in any way, echo can be added, the sample can be turned backwards, white noise can be added, or the sample's sound can be muffled or brightened.

If you find you've run out of tracks in your song, the 'chord creation' feature might be just what you're looking for. The sample can be mixed with the copy buffer, and the sample can even be (effectively) redigitized at a different frequency.

Two further features - sample centralising and the addition of blank 'workspace' - are described here as aids to producing effects, although they can be used for other purposes.

## 1.17 Adding Effects / How To Change The Volume Of An Area

### HOW TO CHANGE THE VOLUME OF AN AREA

#### INTRODUCTION

Within reason, the volume of an area (or the whole) of the sample can be changed. The entire area can be changed by the same amount; for example, to half of its original volume. Alternatively, the volume change can 'slope' upwards or downwards, so that there is a gradual increase or decrease in volume throughout the area.

Volume changes are given as two percentages of the original volume. The first percentage is the new volume of the very start of the area; the second is the new volume of the very end. To change the area by the same amount, these percentages should be equal. To create a volume slope, they should be different.

For example, to halve the volume of the whole area, set both Start and End to 50 %. To double the whole area, set both to 200 %. To increase the volume by a half, set both to 150 %. To reduce the volume by a quarter, set both to 75 %.

However, to start the sound at double its volume but fade away to

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nothing by the end, set Start to 200 % and End to 0 %. To make the volume increase from a quarter of its original to half of its original, set Start to 25 % and End to 50 %. The percentage for 'no volume change' is 100 %.

Four commonly-used presets are available: Halve (50 %), Double (200 %), Fade In (0 % to 100 %) and Fade Out (100 % to 0 %).

There is a limit to how much the volume can be increased; after all, the waveform must be able to fit on the display! If the volume is increased too much, you'll see short horizontal lines at the top and bottom of the display, and the sound will be 'distorted'.

To prevent the volume from increasing too much, switch Check Clip on. Alternatively, use the Max preset to increase the area to its highest possible volume without introducing distortion.

#### STEPS

- 1) Mark a range over the area to be affected.  
How?
  - 2) Open the Change Volume window.  
> Effects menu -> Change Volume
- 3) If desired, stop the sample from 'clipping' the extremes of the waveform display, thus preventing distortion.  
> Switch on Check Clip
- 4) EITHER Select one of the five presets.  
> Click Fade In OR  
> Click Fade Out OR  
> Click Halve OR  
> Click Double OR  
> Click Max

OR Set the starting and ending volume as a percentage of the original volume of the area, then change the volume.

- > Adjust the Start slider THEN
- > Adjust the End slider THEN
- > Click Change Volume

#### NOTES

- \* Hold Shift down while clicking any of the five presets or Change Volume to close the window too.
- \* Use Max Clip in combination with Check Clip. It allows slight clipping; for example, when set to 10, the normal waveform limits can be exceeded by 10 %. For no clipping, set it to 0.

## 1.18 Adding Effects / How To 'Retune' The Sample

### HOW TO 'RETUNE' THE SAMPLE

#### INTRODUCTION

The Change Pitch window lets you change the pitch of, or 'retune', the sample. After the operation, it is as if the sample was originally digitized at a different frequency. This means that the

sample's size will change: It will decrease if the pitch is raised, and increase if the pitch is lowered.

Use this window if you find that the sample can't play high or low enough for you, using the available octave range. For example, clicking Octave Up makes the sample play an octave higher than before using the same notes. The sample's sized is also halved, but unfortunately the sound quality decreases.

You can also set a source and destination frequency using the number boxes or pitch boxes. For example, to retune the current sample to play the current note G-2 when you press the C-2 key, set the source to C-2 and the destination to G-2.

The Cancel Finetune preset retunes the sample so that the Finetune value in the Instrument Properties window is no longer needed. So if the finetune value were -4, the sample would be retuned 4 steps lower and the instrument's finetune would be set to 0.

The operation always affects the whole of the sample; it can't be restricted to a particular area.

#### STEPS

- 1) Open the Change Pitch window.
  - > Effects menu -> Change Pitch
  
- 2) EITHER Set the source and destination frequencies, and retune.
  - > Type a value into Source Freq or change the pitch box THEN How?
  - > Type a value into Dest. Freq or change the pitch box THEN How?
  - > Click Change Pitch
  
  - OR Choose a preset.
    - > Click Octave Up OR
    - > Click Octave Down OR
    - > Click Cancel Finetune

#### NOTES

- \* Anti-Alias reduces noise when retuning downwards (i.e. lowering the pitch).
  
- \* The source and destination frequencies are relative. That is, a source of 10000 and a destination of 20000 will produce the same effect as 100 and 200, or 1 and 2 for that matter; all will retune the sample up an octave.

## 1.19 Adding Effects / How To Mix Two Samples Together

### HOW TO MIX TWO SAMPLES TOGETHER

#### INTRODUCTION

Using the Mix window, you can combine two samples or mix two sample parts together. The contents of the copy buffer and the current sample are mixed; the result is placed in the current sample.

The relative volumes of the two samples to be mixed can be altered. For example, one sample can be set to sound twice as loud as the

other. Both volumes are set as percentages of the original volume; the two percentages should add up to 100 % to prevent distortion,  
More  
so usually both volumes are 50 %.

#### STEPS

- 1) Select one of the samples to be mixed together. How?  
More  
> Click >Buffer
- 3) Select the other sample. How?
- 4) Open the Mix window.  
> Effects menu -> Mix
- 5) If desired, adjust the volume levels.  
> Adjust Source Level to affect the current sample THEN  
> Adjust Dest Level to affect the sample in the copy buffer
- 6) Mix the two samples.  
> Click Mix

#### NOTES

- \* Click Mix with Shift held down to close the Mix window.
- \* To set where the mixing should start in the current sample, click on the required point between steps 3 and 4.
- \* To mix only a specific area in the current sample, mark a range  
How?  
over the area between steps 3 and 4.

## 1.20 Adding Effects / How To Muffle Or Brighten The Sample

### HOW TO MUFFLE OR BRIGHTEN THE SAMPLE

#### INTRODUCTION

The whole or part of a sample can be muffled ('filtered') or brightened ('boosted'), at varying degrees of strength. Filtering reduces noise, while boosting makes the sample more audible.

The filter is a simple 'delta' filter, hence the strange slider names. Filtering is done by calculating the average of each individual value in the sample and the values on either side of it. Boosting employs an opposite process.

#### STEPS

- 1) Mark a range over the area to be affected, or click anywhere on  
How?  
the waveform display to affect the whole sample.
- 2) Open the Filter/Boost window.  
> Effects menu -> Filter/Boost

- 3) Set the strength of the filter or boost. The higher, the stronger.
  - > Adjust the Averaging slider
- 4) If necessary, set the distance between the averaged values. Try cranking it right up to 128 for a great effect!
  - > Adjust the Distance slider
- 5) EITHER Muffle the area.
  - > Click Filter

OR Brighten the area.

  - > Click Boost

#### NOTES

- \* To close the window as well as filter or boost, hold Shift down while clicking Filter or Boost.
- \* The Averaging slider controls the proportions of each individual value compared to the values on either side of it. The Distance slider, as mentioned, is the distance between averaged values. For a 'normal' filter or boost, leave Distance at 1.

## 1.21 Adding Effects / How To Add Echo To The Sample

### HOW TO ADD ECHO TO THE SAMPLE

#### INTRODUCTION

One of the sample editor's most powerful features is the ability to add echo to a sample. In particular, the ending word of a speech sample can echo away to nothing.

Before adding echo, you usually need to add some workspace to the end of the sample. In the Echo window, the echo rate, the number of echoes produced and the rate at which the volume decreases can be adjusted. The echo rate is in fact the distance, in bytes, between each echo. This includes both the echoed part of the sample and the silence (blank space) before the next echo.

The key to this feature really is experimentation. For example, small echo rates can make a speech sample sound robotic!

#### STEPS

- 1) Mark a range over the part to be echoed. It's best if the part is at the very end of the sample; in fact, this how-to will assume that is the case.
- 2) Add workspace to the end of the sample. The echoes will fill
  - How?  
this space.
  - a) EITHER Add any old amount of workspace: any space left over will be removed anyway.
    - > 100000 bytes is usually enough!
  - OR Estimate the amount needed.
    - > Roughly calculate the length of the range (Range End minus

- Range Start)  
> Multiply this by the number of echoes you wish to add [1]  
> Decide on how many bytes of space there should be between each echo, and multiply this by the number of echoes MINUS ONE [2]  
> Add [1] and [2] together, then add this amount of workspace
- 3) Extend the range to the very end of the sample. The range should  
How?  
now cover the part to be echoed and the added workspace.
- 4) Open the Echo window.  
> Effects menu -> Echo
- 5) Set the 'echo rate', the number of bytes between the start of each echo.  
> Type a number into Echo Rate
- 6) If necessary, set the 'volume decrease', the rate at which echo will fade away. The lower, the slower. 0 spreads the volume evenly throughout the range, and is the usual value.  
> Type a number into Volume Decrease
- 7) Set the number of echoes to be added.  
> Type a number into Number of Echoes
- 8) Add the echo and close the window.  
> Click Do Echo with Shift held down
- 9) If desired, remove any unused workspace.  
More  
> Edit menu -> Remove Unused Space

#### NOTE

- \* We appreciate that working out the amount of workspace is fiddly to say the least! Overestimating then removing the unused space afterwards is the best course of action.

## 1.22 Adding Effects / How To Add White Noise To An Area

### HOW TO ADD WHITE NOISE TO AN AREA

#### INTRODUCTION

This fairly unique feature can be used to create decent-sounding instruments without using a sampler. All you need is a bit of imagination... The strength of the added noise ('hiss') can be adjusted.

#### STEPS

- 1) Mark a range over the area to be affected.  
How?  
2) Open the Noise window.  
> Effects menu -> Create Noise
- 3) Set the white noise strength as required.  
> Adjust the Level slider
-

- 4) Add noise to the area.  
 > Click Create Noise

#### NOTES

- \* In step 4, click Create Noise with Shift held down to add the noise then close the Noise window.

## 1.23 Adding Effects / How To Turn The Sample Into A Chord

### HOW TO TURN THE SAMPLE INTO A CHORD

#### INTRODUCTION

'Chords' - a group of notes played together - are very wasteful of track space. A three-note chord takes up three tracks; in a 4-track block, that only leaves one track for anything else!

That's where the Chord Creation window comes in. It turns a sample into a chord of itself, of up to 4 notes. Choose from one of eight preset chords, set the chord's inversion and the interval between each note, or specify each individual note.

You can 'preview' the chord - hear what it will sound like - by clicking Play Chord in the window. The actual chord is much worse quality than the previewed chord, as quality is lost when the chord's notes are mixed together.

Because higher notes are played more quickly than lower notes, the notes in the chord won't end together. However, switch on Erase Trailing Notes to remove the part that doesn't contain all notes in the chord, shortening the sample but ensuring that the notes do end together.

#### STEPS

- 1) Select a sample to turn into a chord of itself. How?
- 2) Open the Chord Creation window.  
 > Effects menu -> Create Chord
- 3) EITHER Choose one of the eight presets.
  - > Click Major [C-2 E-2 G-2] OR
  - > Click Minor [C-2 D#2 G-2] OR
  - > Click Sus 4th [C-2 F-2 G-2] OR
  - > Click Major 6 [C-2 E-2 G-2 A-2] OR
  - > Click Minor 6 [C-2 D#2 G-2 A-2] OR
  - > Click Dominant 7 [C-2 E-2 G-2 A#2] OR
  - > Click Major 7 [C-2 E-2 G-2 B-2] OR
  - > Click Minor 7 [C-2 D#2 G-2 A#2]

OR Set the 'chord inversion' and the interval between each note.

- a) Set the chord inversion.  
 > Adjust the Inversion cycle gadget
- b) Set chord note 1.  
 > Adjust the Basic cycle gadget
- c) Set chord note 2.  
 > Adjust the Third cycle gadget

- d) Set chord note 3.
  - > Adjust the Fourth cycle gadget

OR Set the notes directly.

- a) Set the lowest note of the chord.
  - > Change the Base Note pitch box How?
- b) Set the other notes of the chord.
  - > Change the Chord Note 1, 2 and 3 pitch boxes How?

- 4) Set Erase Trailing Notes appropriately.
  - > Switch on/off Erase Trailing Notes
- 5) Preview the chord.
  - > Click Play Chord THEN
  - > Click Mute or stop playing in the usual way (STOP / space bar)
- 6) Create the chord.
  - > Click Create Chord OR
  - > Shift-click Create Chord [to close the window too]

#### NOTES

- \* Mixing the sample with itself so many times inevitably reduces the sound's volume. OctaMED produces a louder chord if you switch on Full Volume; this prevents the division of each sample value by the number of notes in the chord.

#### TIPS

- \* To improve the chord's quality, before creating the chord:
  - > Change the sample to 16-bit How?
  - > Create the chord as above
  - > Click Max in the Change Volume window
    - More
      - > Change the sample back to 8-bit How?

This, of course, only applies to 8-bit samples.

## 1.24 Adding Effects / How To Turn A Sample Or Area Backwards

### HOW TO TURN A SAMPLE OR AREA BACKWARDS

#### INTRODUCTION

Does your sample contain a hidden message?...

#### STEPS

- 1) Mark a range over the area to be affected.
  - How?
- 2) Turn the area backwards.
  - > Click Reverse (bottom-right) OR
  - > Select Edit menu -> Reverse

## 1.25 Adding Effects / How To Centralise The Sample

## HOW TO CENTRALISE THE SAMPLE

## INTRODUCTION

Some effects, notably Change Volume, perform much better if the  
 More  
 sample is centralised in the the waveform display. Most samples ↔  
 are  
 roughly centralised, but some are substantially too high or low.

## STEPS

1) EITHER Do it the easy way.  
 > Edit menu -> Centralize

OR Do it the hard way.

> Edit menu -> Adjust Y  
 > Click Calculate Average Deviation  
 > Click Adjust (or shift-click it to also close the window)

## NOTES

\* The 'hard way' can be interesting in that it shows you by exactly  
 how much the sample is off-centre. The value in the Adjust by box  
 can be -127 to 128. Positive values shift the sample up, negative  
 values shift the sample down. Unlike the Centralise menu item,  
 this window can centralise a marked range.

## 1.26 Adding Effects / How To Add 'Workspace' To The Sample

## HOW TO ADD 'WORKSPACE' TO THE SAMPLE

## INTRODUCTION

Sometimes, you may need to add empty 'workspace' to your sample,  
 particularly when adding echo. This is made easy in the Add  
 Workspace window.

You can add a particular number of bytes of workspace to the start  
 or end of your sample, or specify a 'factor' and 'adjust' value.  
 The factor and adjust values combine to produce a particular number  
 of bytes to add; they are based on the current size of your sample.

For example, if your sample is 10000 bytes long, set Factor to 1 to  
 add 10000 bytes of workspace. Set it to 2 to add 20000 bytes, and  
 so on. The adjust value is given as a percentage, and is used to  
 add a fractional part to the factor value. For example, Factor 3  
 and Adjust 50 % adds 35000 bytes of workspace.

## STEPS

1) Open the Add Workspace window.  
 > Effects menu -> Add Workspace

2) EITHER Set the factor and adjust values.  
 > Adjust the Factor slider THEN  
 > Adjust the Adjust slider

OR Specify a particular number of bytes of workspace.  
 > Type a number into Bytes

- 3) If necessary, set whether to add the workspace to the end or (rarely) the start of the sample.
  - > Set the Add to cycle gadget to End or Start
- 4) Add the workspace
  - > Click Add Workspace

#### NOTES

- \* Click Add Workspace with Shift held to close the window after adding the workspace.
- \* The Add Workspace window won't open if the current instrument is empty. Select a non-empty instrument. How?
- \* Another way to add workspace is to increase the size of the sample, retaining the existing sample. To do this, type a new sample size into Buffer (top of sample editor), and click Retain in the requester.

## 1.27 Instruments / Copy Buffer Tools

### HOW TO...

Temporarily store and retrieve a sample  
OVERVIEW

The copy buffer is a temporary area, used to store the whole or part of the sample during editing operations. The wordprocessor-like operations Cut/Copy/Paste make extensive use of the copy buffer.  
More

One use of the copy buffer is to store the entire sample; this can be done before changes are made. If the changes turn out to be unsatisfactory, the original sample can be restored by retrieving it from the copy buffer.

#### NOTES

- \* To play the copy buffer's contents, select Tools menu -> Play Buffer Contents
- \* To empty the copy buffer, freeing the memory occupied by it, select Tools menu -> Discard Copy Buffer
- \* There can be mono, stereo, 8-bit or 16-bit information in the copy buffer. The type of information in the buffer is displayed in the bottom-right corner, next to B:.. More

## 1.28 Copy Buffer Tools / How To Temporarily Store And Retrieve A Sample

### HOW TO TEMPORARILY STORE AND RETRIEVE A SAMPLE

#### INTRODUCTION

Before making excessive changes to a sample, it's good practice to

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store it in the copy buffer. Then if you don't like the changes, you can easily retrieve the original sample.

There is only one copy buffer in the sample editor; it's shared by Cut/Copy/Paste, other editing operations, and the storage and retrieval of samples! So if you store the sample in the buffer then proceed to cut a range, don't expect to find the original sample in  
How?  
the buffer...

Because of this, the feature is especially suited to effects, which generally don't use the copy buffer.

#### STEPS

- 1) Store the sample in the buffer.  
> Click Sample< (middle, below Range Display)
- 2) Edit the sample as necessary, but don't alter the copy buffer's contents!
- 3) Retrieve the original sample if necessary.  
> Click >Buffer (middle, below Range Display)

#### NOTES

\* Alternatively, you can swap the contents of the sample and copy buffer, so that your sample is placed in the copy buffer, and whatever was in the copy buffer is placed in your sample. To do this, select Tools menu -> Sample <-> Buffer.

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