

# **SAW DEMO TUTORIAL**

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## **Building an Editing Session**

### **Saw Basics**

To effectively work with *SAW* it is important to organize your work environment. There are numerous windows containing different information all related to the one common denominator, your session. Reading the following will hopefully guide you through a planned step by step approach into a real *SAW* session. The goal is that once you have completed this session you will have achieved a completed production.

The project is going to be a promotional spot consisting of a music bed and vocal dialog track. Choose a workable piece of music. Workable means a music selection with an easy drum beat and preferably no vocals so we can edit the intros, chorus and breaks. Having a microphone available will allow *you* to be the vocal talent in this production. If you don't have a mike use some other vocal audio source and try to use the vocal dialog script as an outline.

### **First On The List Is Sampling Rates**

The sampling rate is how many times your audio card will sample the incoming signal per second. Note that the more samples taken from the audio source the better the quality of sound. Depending on the audio card you have in your system your options may be 11KHz through 48KHz with 48KHz being the highest quality. Note also that the higher the sampling rate the more hard disk space is used. On the average, for every one minute of 16 bit stereo sound recorded at 44.1KHz, approximately 11MB of disk space is used. Choose whichever rate you desire for this production, taking into account your available hard disk space. Open the *File Menu* and select *Record SoundFile*. Name the soundfile Music1 because we're going to record the music first. The *.wav* extension will be automatically added.

Click on the *Rate* button until your desired rate appears. The Demo version of *SAW* talks to your soundcard by using the *Windows MultiMedia Drivers*. Therefore, you must use your soundcard's mixer applet to select the record input source and adjust the record volume level. Each soundcard is different, so refer to your individual soundcard's manual for instructions. Press the *Record Ready* button which turns the lights underneath the VU Meters green. Begin playback from your music source. This can be CD, Radio, Television, Tape Deck, etc. The VU Meters should be responding at this time. If they are not, check to see if your inputs and outputs are connected correctly to and from the audio card and that your mixer is properly setup to record. You can place the mixer path and filename in the *Options Menu Directory Path Setup* and open the mixer applet directly from the VU Meter panel, if desired.

Set the levels in the VU Meters by controlling the incoming volume from your music source or your mixer applet. Leaving some headroom is a very good idea when working in the digital domain. Soundfiles recorded individually at optimum peak levels, when combined can exceed the available headroom mathematically. Therefore clipping occurs. Clipping will sound like sharp pops in the speakers. This can be avoided by recording at lower values. Recording at lower values is not as much of a consideration when recording digitally because we do not have the inherent tape hiss problem that is always a factor with analog recording. It is suggested that the *Record Margin* register about 60% to 70%.

### **We Are Now Ready To Record**

Cue the music to the start point and press the *Record* button in **SAW**. The illuminated green lights should now turn red. Let **SAW** run in record a second or two and then begin playback of your music. Record all the essential elements necessary to build our music bed; i.e. *Intro, Chorus, Break, Ending*. Stop recording by pressing the *Stop* button. Press *Exit /Save* and this will return us to the main windows.

Now lets record the vocal dialog. Open the *File Menu* and select *Record SoundFile*. Name this soundfile Dialog1. The *.wav* extension will be automatically added. It is very important to remain with a consistent sampling rate. **SAW** can not play soundfiles recorded at different sampling rates properly in the same session. Set your levels similar to the settings of the music.

Following is a suggested script to use for the vocal dialog. Of course you're the producer of this Promo Spot so feel free to make up your own script though it would be best to follow this outline for the purpose of this project..

*NEW ON THE MARKET. SOFTWARE AUDIO WORKSHOP. A POWERFUL MULTITRACK SOUND EDITOR WITH UNMATCHED SPEED AND EFFICIENCY. SAW IS FAST BECOMING THE HARD DISK EDITING CHOICE OF PROFESSIONALS WORLDWIDE.*

Press the *Record* button letting **SAW** run a second or two and begin your speaking performance. Speak clearly with a well pronounced delivery. Try a number of different takes as **SAW** continues to record. Unlike linear editors there is no need to stop and begin again if you make a mistake. **SAW** is a non-linear editor that allows you to quickly and accurately find the best points on a soundfile and build each performance. This is a powerful and innovative design that allows you to concentrate on recording and will thoroughly be explained later in this session. All you need to be sure of is that the dialog being recorded is to your satisfaction and appears somewhere on the soundfile. When your recording is complete press *Stop* and press *Exit /Save*.

### **We Now Have Our Material On The Hard Disk And We Can Get To Work Editing**

Since the Dialog1.wav is the current soundfile we'll begin here. Remember **SAW's** innovative design? This section will teach you about **SAW's** non-linear power in the digital environment.

First lets listen to the entire soundfile. Press the *Cue Strt* button in the Full View window. Now press *Play* or click the right mouse button to start playback. The cursor will begin to scroll and the soundfile will play. As you listen notice where some of the better vocal takes are. Now return to the beginning of the soundfile by placing the cursor at the beginning of the FullView window and pressing the left mouse button or press *Cue Strt*. Begin playback again using the right mouse button or the *Play* button. Note that you may jump live, while **SAW** is

playing, to a new play position by just pointing and clicking the left mouse button in the FullView window. This can be of great help in finding your cue points rapidly. Stop playback near a quality take of *NEW ON THE MARKET* using the right mouse button or the *Stop* button. Click the *Transfer* button on the FullView window and the cursor position will transfer to the SoundFile View. As an alternative, clicking the cursor in the yellow time bar area on the FullView window will automatically transfer the cursor position to the SoundFile View.

In the SoundFile View move the cursor back near a visual cue of what you think will be the beginning of *NEW*. This is accomplished by either clicking or holding down the left mouse button and dragging. Use the right mouse button again to start and stop playback. Look and listen to the cue point. Notice the tracking cursor is separate from the positioned cursor. Stop playback and press the *Zoom In* button a couple of times. By visually seeing the audio transients and clicking the right mouse button to start/stop playback find the exact cue point of *NEW*. Zoom in more until you get into the sound/sample detail you prefer.

To achieve seamless edits, choose the beginning of a region by moving your cursor to the approximate position of your edit and then depressing the *Z* key. *SAW* will find the nearest Zero Crossing edit point and move the cursor to it. Marking your edit points on Zero Crossing points will help create edits with no ticks or pops. Now, press the *Mrk Beg* button, zoom out and commence playback. Stop near the ending of *MARKET*. Click the mouse on the tracking cursor where you stopped and zoom in. Using the same method as before, find the out point for *MARKET*. Once found, press the *Mrk End* button. The marked area becomes highlighted. This is a method easily learned and is remarkably faster than the scrubbing routine on reel to reel tape decks.

**Note:** If you select *Auto Zero Cross Marking* from the *Options Menu*, *SAW* will automatically find the nearest Zero Crossing point when you press the *Mrk Beg* or *Mrk End* button.

In the *Regions Menu*, highlight *Create New Region* and type the name VOCAL 1. Click *OK* and the new region appears in the regions list. Zoom out and begin playback stopping near a quality take of *SOFTWARE AUDIO WORKSHOP*. Place the cursor near the beginning of *SOFTWARE* and use the same method as before to locate the exact beginning and ending of *WORKSHOP*. Remember, use the right mouse button as a play and stop trigger so your ears can hear what your eyes are seeing. From the *Regions Menu* select *Create New Region* and name this VOCAL 2. Now use this procedure again and again locating begin and ending points. Name these as individual regions building your regions list according to the sound takes below:

(VOCAL 1)	<i>NEW ON THE MARKET</i>
(VOCAL 2)	<i>SOFTWARE AUDIO WORKSHOP</i>
(VOCAL 3)	<i>A POWERFUL MULTITRACK SOUND EDITOR</i>
(VOCAL 4)	<i>WITH UNMATCHED SPEED AND EFFICIENCY SAW IS FAST BECOMING THE HARD DISK EDITING CHOICE OF PROFESSIONALS WORLDWIDE</i>
(VOCAL 5)	<i>THE HARD DISK EDITING CHOICE OF PROFESSIONALS</i>
(VOCAL 6)	<i>IS</i>
(VOCAL 7)	<i>SAW</i>

### **Saving Your Work**

Up until now the only saved information we have are the soundfiles. These were saved automatically because we named them before recording them and saved them when exiting

the Record Panel. Now you have just created reference marks to these soundfiles and named them as regions, and soon will organize these regions to play in a sequence. To save this data **SAW** creates a separate file. This is called an **EDL** or *Edit Decision List*. **EDL** files are small in size, unlike the large soundfiles, and will actually contain all of the referencing and timing values of your production. This concept allows you to build multiple arrangements of your project referenced to the same soundfiles on your hard disk and access them quickly. To save the work you have just completed, normally you would open the *File Menu* and select *Save EditList*. This Demo Version of **SAW**, however, will not allow **EDL** file saving.

### **On With The Session**

Now open the *File Menu* and select *Open SoundFile*. Choose Music1.wav. This is the music soundfile. Notice that even though Music1.wav is now the current soundfile you still have instant access to the Dialog1.wav file which your regions come from. To see how this works, double click on a region in the EditList View window with the left mouse button. The Dialog1.wav file will appear and automatically highlight the marked area the region references. To return to where we were you will now need to open the Music1.wav file again.

Apply the same methods used earlier when building the vocal dialog regions to build the following music selections. For this music bed, we need an *Intro* region, a *Chorus* region, and an *Ending* region. Find a section of your music that has a nice beginning feel to it. The goal here is to try and build clean *Mrk Beg's* and *Mrk End's* within the rhythm of the music. Begin with a downbeat and *Mrk Beg*. Find a rhythmic value, 8 beats away, usually just before another upcoming downbeat and *Mrk End*. So if we *Mrk Beg* on a downbeat and *Mrk End* just before another upcoming downbeat we should theoretically be able to loop this region endlessly, though this may take some practice. Name this region *INTRO*. Use the same method to create a *Chorus* region. Then create an *Ending* region. Remember to zoom in and get the cursor right on the beat of the music.

Your regions list will display alphabetically and should look like this:  
*CHORUS, INTRO, ENDING, VOCAL 1, VOCAL 2, VOCAL 3, VOCAL 4, VOCAL 5, VOCAL 6, VOCAL 7.*

### **On To The Next Phase Of Production, Building And Splicing Together A Sequence**

Highlight the *INTRO* region from the EditList View window by clicking the left mouse button once. Press the *Add* button and *INTRO* becomes an entry on the Sequence side of the EditList View window. Add *INTRO* three times by pressing the *Add* button two more times. Now highlight the first *INTRO* entry on the Sequence side and press the *space bar* on the computer keyboard, or the right mouse button. The *INTRO* entry will play and splice to the next entry.

**HOW DOES IT SOUND?** If the *INTRO* entry needs some adjustment, just double click on the *INTRO* region on the Regions side of the EditList View using the left mouse button. The soundfile will come to focus and the highlighted area will reflect the *INTRO* region. Note the difference between region and entry. A region is a reference to a marked area in a soundfile. A region becomes an entry when it is entered into a sequence. Use the *ctrl* and the *left* or *right arrow* keys on the computer keyboard to jump to the *Mrk Beg* or *Mrk End* points in the soundfile. Reposition the cursor with the mouse or by using the *arrow* keys only. Adjust the in point or out point and *Mrk Beg* or *Mrk End*. Open the *Regions Menu* and select *Update Region*. The *INTRO* region is updated with the new marks.

Now try playing the sequence again. Once it meets with your approval highlight [End Of Sequence] on the Sequence side of the EditList View window. Now highlight the *CHORUS* on the Regions side of the EditList View window and press the *Add* button once. Your Sequence view should now have: *INTRO, INTRO, INTRO, CHORUS*. Place the cursor on the third *INTRO* entry and press the *Preview* button. The *Preview* button will preload just enough audio buffers to play the splice from the *INTRO* entry into the *CHORUS* entry.

**HOW DOES IT SOUND?** Adjust the *CHORUS* entry using the same method as before with the *INTRO* region. Update the region. Add the *ENDING* region the same way, by highlighting [End Of Sequence], highlighting the *ENDING* region and pressing the *Add* button.

Your Sequence View should now have:  
*INTRO, INTRO, INTRO, CHORUS, ENDING*.

### **Building the MultiTrack**

Now you will see how *SAW* brings all the elements together. Open the *Windows Menu* and select the *MultiTrack View*. At first, Track 1 is the activated or hot track. The sequence entries in the hot track will always be red and the other entries in the other tracks will be blue. The menu features will only effect the hot track.

The sequence now appears in both the Sequence side of the EditList View and on Track 1 of the MultiTrack. Now select Track 2 by clicking on the top button next to Track 2. Track 2 now becomes the hot track. Notice there aren't any entries on the Sequence side of the EditList View. This is because Track 2 is currently empty. Each track will show its sequence of entries when activated.

Highlight the *VOCAL 1* region and press *Add*. *VOCAL 1* will appear on Track 2 and in the Sequence side of the EditList View. Click and hold down the left mouse button on *VOCAL 1* in the MultiTrack while holding down the *shift* key on the computer keyboard. Drag and position *VOCAL 1* under the splice point of *INTRO 1* and *INTRO 2*. Now using *SAW's* ability to work in a non-linear fashion, highlight *VOCAL 5* and this time click the cursor under *INTRO 3* on Track 1 of the MultiTrack. Now when pressing the *Add* button, *VOCAL 5* will automatically jump to the cursor position on the MultiTrack.

*SAW's* MultiTrack capability allows for live combining of up to four stereo (8 tracks) of digital audio, on one stereo sound card. This powerful and unique design allows you to break away from the cut and paste routines of trying to mix all your soundfiles into one. Try playing the two tracks together to see if you like the timing of the vocal entries in relation to the music bed. Place the cursor in the gray area to the left of the entries on the MultiTrack by clicking the left mouse button. Using the right mouse button to start and stop, begin playback.

**HOW DOES IT SOUND?** Notice, *SAW* is mixing Track 1 and Track 2 together for you in real-time. This translates into unmatched versatility when building productions of this nature. Continue highlighting each vocal region with the next region being *VOCAL 2*. Place the cursor into a position beyond the previous entry on Track 2 of the MultiTrack and press *Add*. Continue this method in the order of *VOCAL 6, VOCAL 3, VOCAL 4, VOCAL 7, and VOCAL 2*. Drag each entry into position by auditioning the tracks.

Your sequence should be as follows:

*VOCAL 1, VOCAL 5, VOCAL 2, VOCAL 6, VOCAL 3, VOCAL 4, VOCAL 7, VOCAL 2*.

The performance should flow like this:

*New on the market, the hard disk editing choice of professionals. Software Audio Workshop is a powerful multitrack sound editor. With unmatched speed and efficiency, SAW is fast becoming the hard disk editing choice of professionals worldwide. SAW. Software Audio Workshop.*

If your music bed runs short, you can insert a music region on Track 1. Activate Track 1 and highlight the region of choice in the EditList View window on the Regions side. Highlight the entry on the Sequence side of where you want the insert to be. Press *Add* and an insert occurs. To delete a music entry from a sequence, highlight the entry of choice on the Sequence side of the EditList View and use the *delete* key on your computer keyboard. All following entries will move forward. If you want to delete an entry without disturbing the following entries use the *shift and delete* keys.

**WARNING: IF YOU DELETE A REGION ON THE REGIONS SIDE OF THE EDITLIST VIEW ANY SEQUENCE CONTAINING THAT REGION WILL ALSO BE ALTERED.**

### **Non-destructive mixing in the MultiTrack View**

Open the *Window Menu* and select *Mixer Window*. Each fader will work the volume (mix) levels for each track. *SAW* does not process these mix changes to the soundfile. Instead the volume changes remain non-destructive because *SAW* is performing these changes in real time. This gives you the freedom to audition and change a mix without affecting the original soundfile.

Notice the yellow line running underneath the regions on each track. This is the volume line. When a volume change occurs it is referred to as a mix change. The yellow color represents no volume change to the actual volume that the soundfile was recorded at. A *-db* such as *-3db* will change to a dark green and a *+db* such as *+3db* will change to a bright green. Place the cursor at the beginning of *VOCAL 1* on the MultiTrack and grab the first fader on the Mixer window. Pull down the fader until *-5* appears. Place the cursor at the end of *VOCAL 1* and slide the fader back to *0*. Now when playback occurs across *VOCAL 1* the music on Track 1 will drop *-5db*.

**HOW DOES IT SOUND?** If you want to change the mix, place the cursor somewhere before the mix change you want to alter and press *NEXT* on the Mixer window under the proper fader. The cursor will jump to the next mix change. Adjust your *db* settings on the Mixer. Use the same procedure for each crossing of *VOCAL* entries and music getting just the right mix you're looking for.

Now, let's put an ending fade to the Promo Spot. Place the cursor at the end of the music on the MultiTrack and pull fader 1 down to *-70db* on the Mixer. Look at the *Current* value in the Time View window and scroll the cursor on the MultiTrack until about 7 seconds have been subtracted. Make sure Track 1 is the hot track and open the *Sequence Menu* and select *Fade To Next Mix Change*. Select *OK* and *SAW* will draw a fade that is a 7 second fade out of the music.

To put a rising fade in the beginning of the music place the cursor at the beginning of the first *INTRO* entry. Pull fader 1 down to *-70db*. Now place the cursor somewhere before the *-5db* mix change. Place the cursor on fader 1 and hold down the left mouse button while clicking

the right mouse button. This will automatically reset the fader to zero. Now place the cursor back at the beginning of the music bed making sure that *-70db* is registered in the fader 1 window. Open the *Sequence Menu* and select *Fade To Next Mix Change* and **SAW** will draw a fade up to the next mix change.

### **In Closing**

Try playing the Promo spot from the beginning by placing the cursor in the gray area to the left of the entries on the MultiTrack and click the left mouse button. Click the right mouse button to start/stop playback. You may now continue to make any changes to your production that you like, without even altering any of your original soundfiles.

You can now play your production directly to DAT or Cassette, or you can do an internal mixdown to one soundfile using the process called *Paste Sequence*.

**SAW** opens the door to powerful audio production with innovative design concepts uniquely packaged in one program. We hope you enjoy your exploration of **SAW's** Non-Linear editing environment and we hope to see you as a registered **SAW** owner soon.

Thank you, and happy sessioning !