Running Studio 16 Before Partitioning Your Hard Drive

Because Studio 16 is very hard disk read/write intensive, it is very important to create a partition on your hard drive dedicated to your working audio files. If you've just received your AD516 or AD1012, and would like to try it out before you backup and partition your hard drive, you can safely run Studio 16 by recording into memory. When Studio 16 was first installed it set your record path to RAM:. This means that all recordings will be made directly to your memory - not to your hard drive. Check the Sample List for your record path. It is indicated by a ☒ next to a path name. Make sure RAM: is the selected record path if you have not partitioned your hard drive.

Partitioning Your Hard Disk

Studio 16 can use any Amiga DOS device to record and playback from, (i.e. DF0:, DH0:, RAM:, etc.). And, unless you are recording to RAM:, Studio 16 is very hard disk read/write intensive. Therefore, it is very strongly recommended that you create a separate partition on your hard disk for your audio files you are recording, editing, and playing. If your Amiga crashes while a write is in progress, you may have to reformat your hard disk. If you have partitioned your hard disk and a crash occurs, you will only lose your "working" audio partition. You will not lose anything valuable, i.e. programs and archived samples.

When naming your Audio partition, do not name it Studio16 or Studio16_3. This will confuse the system since there is a Studio 16 assign. Tutorials in this manual refer to the partition as if it were named "Audio". You may want to name your partition "Audio" as well.

NOTE SunRize is not responsible for lost data. Partition your hard drive!

Reselection

If you are working with a single hard disk, turn "Reselection" OFF. If you are using more than one Hard Disk, you should have "Reselection" ON. Your version of WorkBench, the controller your using will determine how to turn Reselection OFF.

Commodore Controller - WB 2.0

1. Insert the WorkBench 2.0 Install disk into your floppy drive.
2. Select the Tools drawer
3. Select Turn Reselection OFF if you have just one hard disk.

Commodore Controller - WB 3.0

1. Insert the WorkBench 3.0 Install disk into your floppy drive.
2. Select the Tools drawer.
3. Select English.
4. Select Turn Reselection OFF if you have just one hard disk.

Third Party Hard Disk Controller

1. Refer to your hard disk controller manual for instructions.

Set Your Record Path

A Record Path is the assigned location for your new audio recordings. The default path is RAM:. Once you have partitioned your hard disk, you will want to change the record path to a directory on the hard disk. Your record path should be located on your Audio partition.

The following changes the record path from RAM: to a directory on the hard disk.

1. Select Sample List from the Applications Menu (^O).
2. The Sample List appears with RAM selected as the record path, note the selection box next to the path name.
3. To add another path to Sample List, select Add New Path from the Sample List menu. Select your new path from the requester and click OK.
4. Sample List will update and display the two directories. You can continue adding paths (up to eight) to suit your setup. Remove the RAM: path by selecting Remove Path from the Sample List menu and selecting it in the requester.
5. Once you have all your paths listed, choose one for the record path by clicking the active box next to its name. You can change this selection at any time.
6. To save the Sample List setup, select SaveSetup from Project menu. This will also save the positions of the windows on the screen. If you don't want Sample List showing every time you run Studio 16, close Sample List before you SaveSetup.

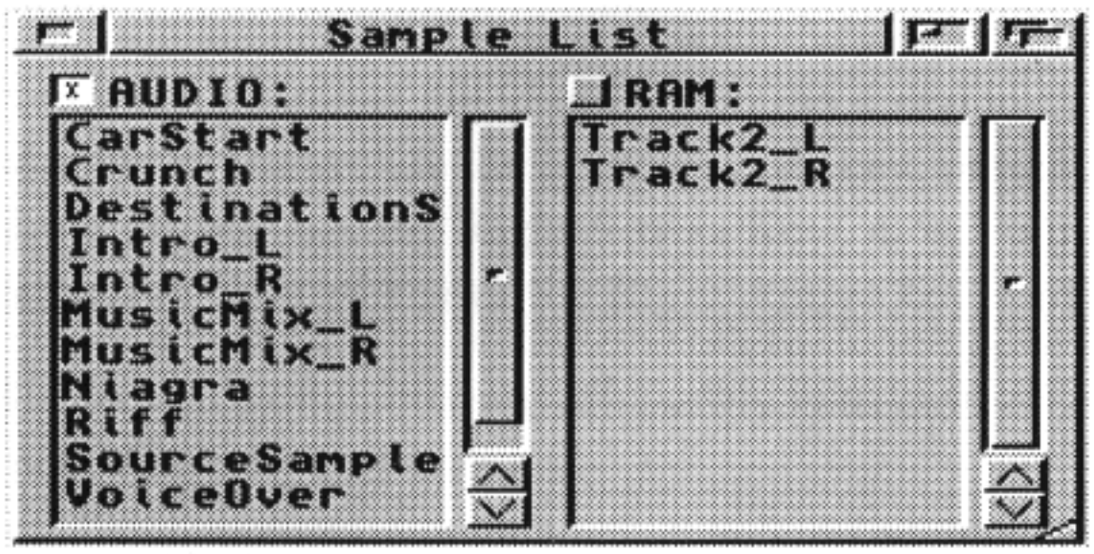

Figure 2-4. Sample List

Studio 16 File Structure

Studio 16 requires the following directories of files to operate. They are automatically copied by the installation utility into a Studio16 directory.

- Apps
- Drivers
- Utilities
- ProjectMenu
- Fonts
- Libs

Studio 16 should have an assign called "Studio16_3:" that points to the created Studio 16 directory. The installation utility will add this assignment to your User-Startup. If you move the Studio 16 directory later, be sure to update the assignment in your User-Startup file.

Getting Started

This chapter is a brief tutorial on using basic Studio 16 options. Included is a description of common screen elements and short tutorials on recording, editing and playing a sample. Detailed information on all modules is provided in Chapter 8, the Reference Section of this manual.

It is recommend that you open and read the **Read_Me** file in the Studio 16 directory before loading Studio 16. This file includes updated information not found in this manual.

Load Studio 16

1. Double click the **Studio16** icon in the **Studio16** drawer. For more detailed instructions see Chapter 2 - Installation.
2. An About window appears listing the amount of disk space available in your default record path. It also displays the amount of chip and fast RAM installed in your system. Click **OK** to close it.

Menus and Keyboard Shortcuts

Studio 16 Modules can be launched from the Applications Menu or from the keyboard. To select a module from a menu, click the right mouse button and hold it down. Move the mouse pointer over a menu option and release the mouse button to select it.

Keyboard shortcuts are identified in the menu to the right of the option name. Module shortcuts use the control (Ctrl) key, indicated by(^). All other keyboard shortcuts will use the Right Amiga Key(*A*-). To use a keyboard shortcut, hold down either the Control key or the Right Amiga key, and type the letter indicated.

The key to using software efficiently is to memorize the keyboard shortcuts for your most common applications.

Once a Module is launched it may add more menus to the menu bar. For a module's menu options to be available and to use its keyboard shortcuts, you must first make the window active by clicking on it. The title bar of a window will be highlighted when it is active.

NOTE OK requesters can generally be accepted or rejected with the standard keyboard shortcuts. For OK, Left *A*-V. For Cancel, Left *A*-B.

Common Screen Elements

Most screen elements are common to the Amiga Intuition standard; however, there are a few gadgets that you may not be familiar with.

Drop List

Indicated by a ↓ , allows you access to available choices for an option. Click the ↓ button for a list to appear below the current selection. Use the familiar scroll bar and arrow buttons to locate a new selection. Click on an item to select it.

Active Boxes

Many options can be turned on by activating them. Click the active box next to the option's label. Deactivate it by clicking the button a second time or by selecting another option.

Window Zoom

The Window Zoom gadget provides a quick way to switch between two different window size/position settings It is a toggle that ,when selected, makes a large window small and a small window large.

Depth

Located in the top right corner of all windows, the Depth button allows you to bring a window to the front or move it to the back. Click the button once to move it to the front. If the window is already in front, the single click will move it to the back or underneath all other windows. Also selecting a module from the Applications Menu will bring it to the front. If ClicktoFront is selected in Preferences, this button will not appear. Windows are brought to the front by clicking anywhere on them when the ClicktoFront option is selected.

Resize

In the lower right side of most windows is a small triangle. Click and drag this triangle to resize a window. As windows are reduced in size, text in the window and title bar will truncate.

Record and Play

Once you have installed and loaded Studio 16 you are almost ready to record.

Before you can record, you need to connect your audio source. Any audio source with a "Line Out" may be used, preferably a CD player. Use a short RCA patch cable to hook up the CD's Line Out to the AD516's or the AD1012's Audio IN jack(s). If your audio input is from a microphone, you will need an external device, like a mixer, to convert the mic output into an RCA Line Out. The card's Audio OUT jack(s) can be hooked up to a receiver or an amplifier system's CD/AUX Line In. If you have a LTC SMPTE time code source, plug it into the top jack: SMPTE IN.

Now that you are ready to record, there are two methods of recording. One uses the Recorder module and the other records from the Cue List. For this brief demonstration of recording, the Recorder module is used.

Record with Recorder

1. Load Recorder, Sample List and Meters from the Applications Menu. Close any other modules that are open.
2. Check your record path in Sample List. If you have not partitioned your hard drive, it should be set to RAM:. (The record path is identified by a x.)
3. Turn on your audio source.
4. Click **Monitor** in the Recorder window. You should hear the audio playing through your output device.
5. **AD516 ONLY** - To make a stereo recording, select the L and R channel from the Recorder Menu so that both channels have a check next to them. To make selections from the Recorder Menu, make sure the Recorder window is highlighted. You should have audio connected to both of the AD516's audio inputs when recording in stereo.
6. Activate Meters by clicking on the window. From the Meter's Channels Menu, select Input, Output and Play 1. These are easily selecting by holding down the right mouse button, and clicking the channels with the left mouse button. You will now see activity on the input and output meters.

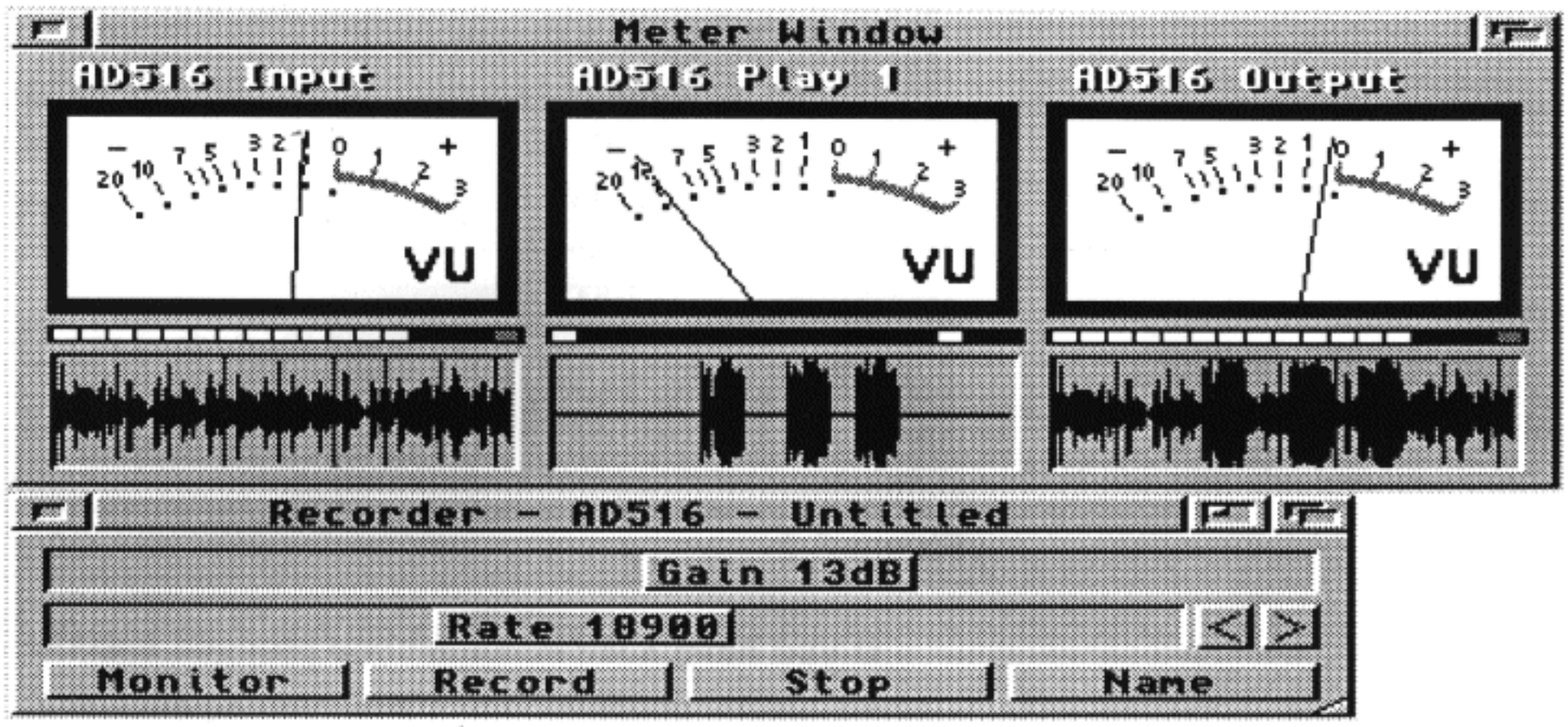

Figure 3-1. Meters and Recorder

7. Set the proper **Gain** in the Recorder setting by watching the meters for clipping. Clipping results from the gain being set too high. It is indicated on the meters by the VU meter going into the (+) section, the LED meter flashing on the far right side, and the scrolling graph meter peaking off the top and bottom. Adjust the

Gain so that clipping rarely, if ever, occurs. See the Meter Reference Section for more information.

8. **AD516 ONLY** - Stereo samples will be shown in the scrolling meter by channel. The input from the left channel will be graphed on the top of the graph, and the input from the right channel will be graphed on the bottom of the graph. Disconnect one of the inputs to see the effect on the scrolling graph.

9. **AD1012 ONLY** - AD1012 owners have the option of setting a variable lowpass filter. Activate **Auto Filter** to set an appropriate cutoff filter for your sampling rate. (The AD516 has a digital filter. It's automatically activated whenever you record.)

10. Select a sampling **Rate**. Keep in mind that 44.1KHz is the CD standard and 48KHz is the standard rate for DAT players. Anything more than that does not have an audible effect. For video purposes you may want to record at about 32KHz. This gives a 16KHz frequency response, more than adequate for narration and sound effects. (The nearest available sampling rate for the AD1012 is 30,120Hz.)

11. Click the **Name** button and type in a name for your sample. The default is Untitled.

NOTE You can name the sound before you start recording, or you can rename the sample in the Sample List later.

12. To begin recording, click **Record**. A window will appear in the middle of the screen indicating that recording is in progress. Also displayed is the name(s), the size of the sample recorded so far, and the remaining disk space. These numbers will change as the record proceeds. And, unless you're recording to RAM, your hard disk light will flash.

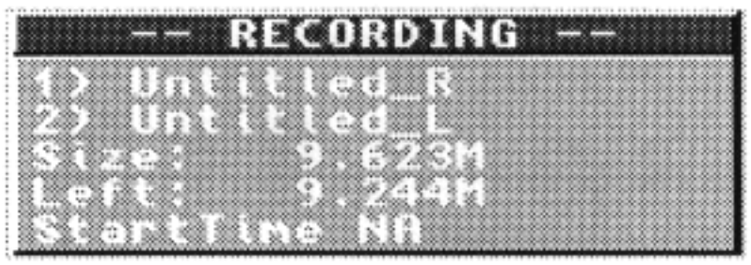

Figure 3-2. Recorder's Progress Indicator

If you have SMPTE time code plugged into the AD516 or AD1012, the recorder will show the time your recording began. Later, if this sample is loaded into the Editor or the Cue List, this SMPTE time code will enter itself with the sample.

13. To stop recording, click the **Stop** button. If you continue to hear sound, it is the monitoring of the audio source. Click the **Monitor** button to stop monitoring. The "monitor" and "record" functions are independent. Also, your hard disk light may continue to flash for a few seconds after selecting stop. This is normal.

Play from Sample List

There are a few ways to play back a sample. To play back from Sample List:

1. Launch Sample List from the Applications Menu, (^ O). (You can close any other modules that are open.)
2. Select the sample you recorded earlier by clicking on its name. It will be in the active directory. The active directory, or record path, is indicated by .
3. **AD516 ONLY** - To playback a stereo sample, you need to select both the samples that were recorded, (e.g. Untitled_L and Untitled_R). Select both samples by shift-clicking. (Holding down the shift key while clicking on multiple sample names.)
4. Play the sample(s) by selecting **Play Sample** from the Sample List menu or by typing *A*-P.
5. To stop the playback early, select **Stop Playback**, *A*-S.

NOTE When playing back multiple samples, all samples must have the same sampling rate.

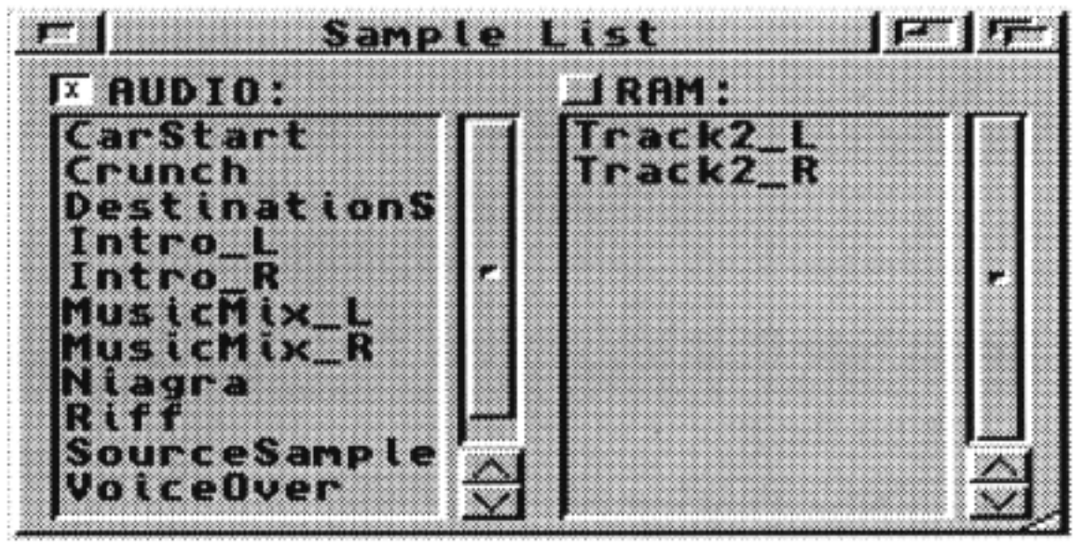

Figure 3-3. Sample List

Edit a Sample

To make changes to a sample, it must be loaded into an editor. This part of the tutorial covers basic navigation within the editor and use of the non-destructive cut, copy and paste.

Load a Sample Editor

1. Load Sample List from the Applications Menu (^ O).
2. Select the sample you want to edit and select **Edit Sample** from the Sample List Menu or type *A*-E.
3. **AD516 ONLY** - To edit a stereo sample, select two samples in the Sample List (ending in _L and _R) by shift-clicking and then select Edit Sample (*A*-E)
4. An Edit window will appear with your sample(s) graphed.

5. Select **Play All** from the Editor Menu to hear the sample (*A*-P). The keyboard shortcut *A*-P is one the most useful short cuts, it causes samples to play in many of the modules.

Copy a Range and Duplicate It Within the Sample

1. Mark a range over the area of the graph you want to duplicate. To mark a range, click on the graph and drag the pointer to the left or right. To alter the size of an existing range, click on one edge of the range and drag it to a new location.
2. Select **Play Range** from the Editor Menu (*A*-L) to hear the marked range.

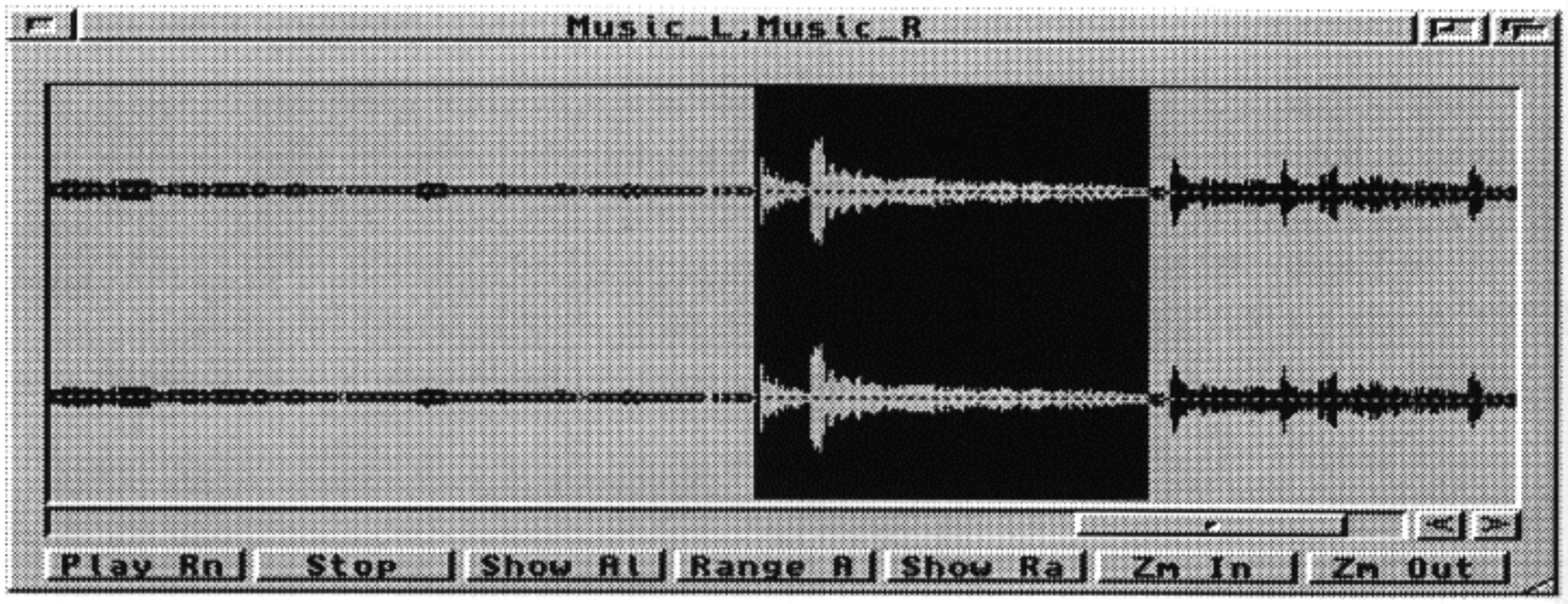

Figure 3-4. Edit Window

3. Select Non-Destructive Copy from the Edit Menu.
4. Click on the graph to select an insertion point for the copied range.
5. Select Non-Destructive Paste, and Insert at Start, (*A*-V). (Start refers the beginning of the marked range. When you just click on the graph, you create a very small range.)
6. Click **Play All** to hear the new version of the sample. **Undo Last** will return the sample to its previous state.

NOTE Because the previous copy and paste were Non-Destructive edits, **Undo Last** is able to cancel the change. Destructive edits are <u>not</u> reversible. Having a choice between destructive and non-destructive editing allows you to have more control over your samples. Destructive editing actually changes the data on your hard drive as you alter a sample in the editor. However, Non-destructive edits do not destroy data on your hard drive. It just remembers which edits you want to perform on the sample. Non-destructive edits can be made permanent and free hard disk space by selecting Make Permanent. See the Reference Section on the Editor for more information.

Delete a Range

1. Mark a range to delete using the previous technique.
2. Select Non Destructive Delete from the Edit Menu, (*A*-D). Since the delete is non-destructive, it will not erase data from your hard disk. To free hard disk space, use the destructive delete or select Make Permanent after doing the non-destructive delete.

Create a Region

Regions are named ranges within samples. Once created in the Editor, they can be dragged and dropped into the Cue List for playback.

1. In the Editor, select a range to be named as a region. For details on marking ranges refer to the technique mentioned previously in this section.
2. From the Editor's Options Menu, activate Show Regions. An Editor Regions List will appear.
3. With Editor Regions List active, a Region Menu is available in the Menu bar.
4. Select Add Region from the Region Menu to create a region from the marked range in the Editor.

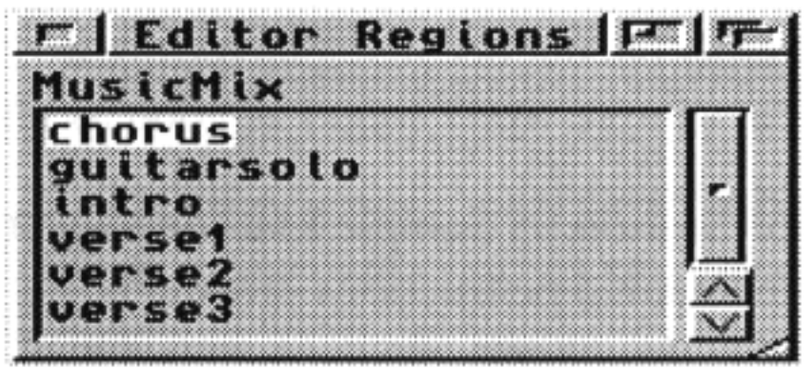

Figure 3-5. Editor Regions List

5. When prompted, enter a name for the region.
6. You can now drag this region into Cue List for playback. (Regions can also be dragged from the Sample List. Show Regions must be activated from the Sample List menu for regions to be displayed there.)

Convert a Sample

When a sample is recorded it is usually stored in the Studio16_2.0 file format. This default format is selected in Preferences from the Project Menu. Studio16_2.0, like AIFF, is a 16 bit format. It includes special data that keeps track of non-destructive edits and marked regions. To export a sample to another audio program you will probably have to convert to another file format. Studio 16 will convert to: Studio16_1.0. AIFF 16bit, IFF_8SVX, AIFF 8bit, and RAW. Below are the steps to convert a sample to an IFF_8SVX format.

1. Load Sample List from the Applications Menu (^O).