

In a typical soundtrack project you will either log the sound effects and music times yourself or get a list from a producer. Here are the times our imaginary producer has given us for the start of each sound element used in our cartoon scene:

Sample Name	Start Time
DoorKnock	01:00:06:07
Dog	01:00:07:03
OpenDoor	01:00:08:21
FlyBy	01:00:09:10
Ricochet	01:00:10:02
Punch	01:00:10:25
Cuckoo	01:00:11:07
CartoonMusic	01:00:13:28
Crash	01:00:16:16
Applause	01:00:18:07
SqueakPop	01:00:24:26

NOTE For cartoons it's also common to produce a sound track first and then create the animation to match. Even if you don't work that way, using the Time Line Cue List is a great idea. The Time Line Cue List makes it easy to make changes in your sound track at any point in the production, including after the animation is finished.

Record the Samples

The first thing you would do for a project like this is create sounds, record sounds on location, or find suitable sounds in a sound effects library. Then you would record the sounds to your hard drive with Studio 16's Recorder, and clean them up with the Editor. For more on using the Recorder and Editor, see their respective reference sections in Chapter 8.

For expediency's sake, we've already recorded the sounds for this project. Some of them came from the Hollywood Edge sound effects library demo CD. The sounds are in the Samples drawer, which is inside your Studio16 drawer. To save disk space they were sampled as low quality 8 bit samples, but they'll work for this exercise.

Prepare the Cue List

Open the Cue List and Set Fade and Drag Options

1. Use the Cue List menu item in the Applications menu to open the Time Line Cue List, if it's not already open.
2. If an existing Cue List loads in the Time Line, select New from the Cue List menu to load the default Cue List. The default Cue List contains four empty audio tracks.
3. Turn Any Direction drag mode on, if it's not already on. This will allow you to drag flags and Audio entries freely later on. (Figure 6-1.)

4. Turn Unlimited Cross Fade mode on, if it's not already on. To do this click the Unlimited Cross Fade button on the top of the Time Line Cue List window. This will allow you to create real time cross fades of any duration. (Figure 6-1.)
5. Turn the Cue List ON. Click the ON/OFF button on the left side of the Time Line Cue List window. The Cue List will not play if this button is OFF.

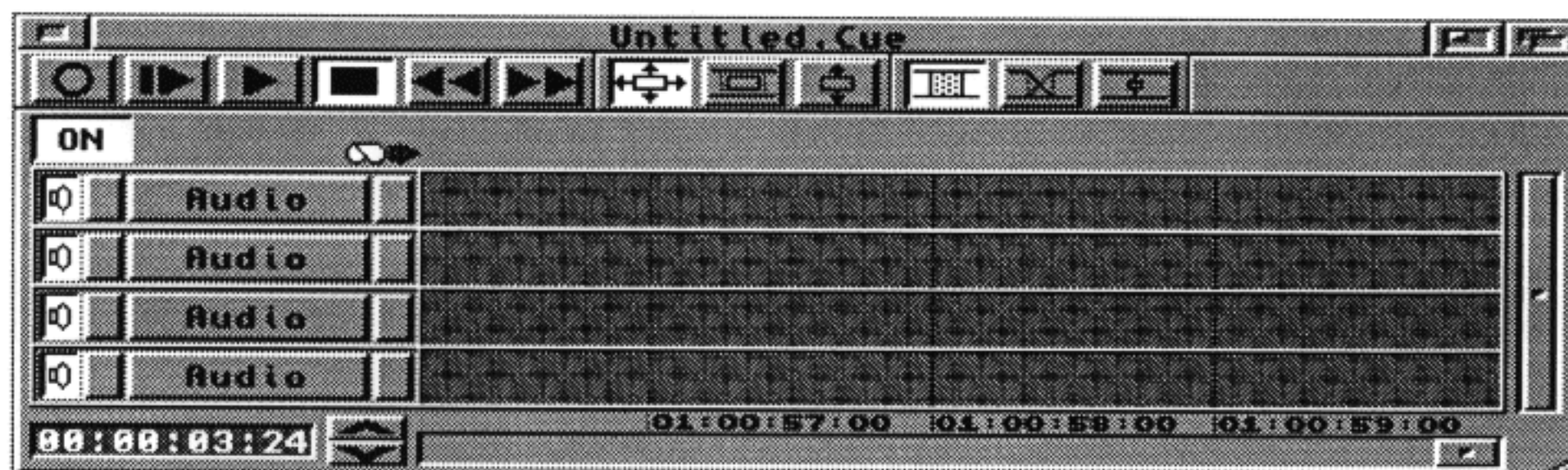


Figure 6-1.

An Empty Time Line Cue List

Set Cue List Preferences and SMPTE Rate

1. Use the Cue List Preferences menu item in the Options menu to open the Cue List Preferences requester and set the following parameters.
2. For this project we'll want the Time Line Cue List to display all times using SMPTE time, so click the SMPTE button in the Time Options area of the requester. This way the times we use will match the times used by our imaginary producer, and if this was a real cartoon, the Time Line Cue List would synchronize to it.
3. Type a time in the Start Time field that's 15 seconds or so before the beginning of the scene. The Start Time field is at the bottom of the Cue List Preferences Requester. Simply type in the preferred start time. In this case we want to be ahead of the start time of the first sound effect, the Door Knock, which starts at 01:00:06:07. So enter a time that's roughly 15 seconds ahead of that, like 00:59:50:00.

There's nothing sacred about starting the Time Line Cue List's view 15 seconds before the scene starts; you could start 5 seconds ahead or 30 seconds ahead or whatever works for you. You will want to start far enough ahead so that your system has time to preload samples before they have to play. Fifteen seconds gives you some room to work with, but you may be able to start playback within 5 seconds of the start of the scene and still have the first samples loaded in time to play.

4. Type a time in the End Time field that's 15 seconds or so after the end of the scene. The End Time field is at the bottom of the Cue List Preferences Requester. Simply type in the preferred end time. In this case we want to be after of the end time of the last sound effect, the SqueakPop, which starts at 01:00:24:26. So we want to allow for the sample to play and enter a time that's

about 15 seconds past when it ends. SqueakPop lasts about 1 second, so enter 01:00:41:00.

The range of time you choose to view in the Time Line Cue List does not affect when playback will start and end. Playback starts wherever the Position flag happens to be and ends when you click the Stop button. There is a special flag that makes it easy to set a start time for playback, called the Start flag (see the following sections).

5. When you're done entering the start and end times for the Display Boundaries, close the Cue List Preferences requester by clicking the close gadget in the upper left corner of the requester. Keep all Display Options and Undo Levels at their defaults.



Figure 6-2.

Cue List Preferences

6. Use the Preferences command in the Project menu to open the Preferences requester. In the upper right corner of the requester is a section labeled "SMPTE". Click the one labeled 29.97, if it's not already selected.

Since we're using SMPTE time code in this tutorial project, we'll want to make sure that we are using the same SMPTE time code type as our imaginary producer.

There are 4 commonly used SMPTE time code types:

- 29.97 frames/second for NTSC video
- 30 frame drop frame for NTSC, which keeps more accurate real time by skipping frame numbers periodically
- 25 frames/second for PAL video
- 24 frames/second for film.

For this Tutorial we've assumed our producer is using 29.97 frames/second SMPTE time code.

7. In Preferences you select the Studio16 Interface Colors. To follow along with this tutorial you select the Default color option. Close Preferences after you make the selection.



Figure 6-3.

Studio 16 Preferences

Set the Start Flag

1. Set the start time for the cartoon's Cue List by dragging the Blue Start flag about 5 seconds before the start of the first entry. Since the first entry begins at 01:00:06:07, let's put the blue start flag at 00:59:57:00. To move the Blue Start flag, just grab its banner and drag it left or right in time. If you drag past the left or right edge of the Time Line Cue List, the Time Line Cue List will scroll. As you move it, you'll see its start time displayed in the upper right area of the Time Line Cue List window, called the Text area.

Flags are handy visual markers that you can move with the mouse. You can use the flags to see where you are in the Time Line Cue List, to mark places in the Time Line Cue List, and to define the start and end times for recording. The Blue Start flag is a special flag you can use to mark the beginning of your Cue List. The "banner" part of the Start flag looks like an arrow pointing to the right: The "banners" of the flags float just above the Time Line Cue List and just below the transport buttons, drag buttons, edit buttons, and the text area. The "flag poles" of the flags are vertical lines drawn over the Time Line Cue List to show the exact location of each flag in time.

2. Another way to move the Blue Start flag is by entering a time in the Flag Parameters requester. Double click the Blue Start flag to open the Flag Parameters requester. In the requester's time field you can type the time where you want the flag to be. To get a feel for moving the flag, try both methods. Drag the flag left and right, and then double click the flag and try typing the start time into the requester.

Add and Name the Audio Tracks

1. With our Time Line Cue List boundaries set and our start flag set, the next step is to name our Audio tracks. Knowing that we have three characters, plus some music, let's create four tracks.

NOTE The fact that the Time Line Cue List allows up to 100 tracks means you can create plenty of tracks to keep your sound track organized. The amount of samples that you can actually play at one time depends on the SunRize cards you have in your Amiga.

2. Use the Add Audio Track in the Track menu to add audio tracks if you don't see four audio tracks. Tracks are horizontal strips on the Time Line Cue List. They begin with a series of buttons. The first button in each track, when selected, looks like a speaker.

If you can't see all four tracks, drag the resize gadget down. The resize gadget is in the lower left corner of the Time Line Cue List window.

3. The third button from the left on each track shows the track's name. Right now all your tracks say "Audio". Let's change them so that one says "Bird", one says "Cat", one says "Dog" and one says "Music". Click on the Name button for the top track. This will open the Audio Track Parameters requester.



Figure 6-4.

Audio - Track Parameters

4. At the top of the requester is a Name field. Click in the Name field and delete the word "Audio". You can use the delete key, the backspace key, or just type A-X to clear the field.
5. Now type the word "Bird" and hit return. The track's Name button should now say "Bird".
6. Below the Name field is the Sampling Rate slider. The sampling rate on all the tracks playing on a single SunRize card must be the same. The cartoon tutorial samples were sampled at 9600Hz, so set the sampling rate by dragging the Sampling Rate slider until it says "Rate 9600".
7. Now do the same for the other three tracks, except type "Cat" for track 2, "Dog", for track 3, and "Music" for track 4. Each time you click a different track's Name button, the requester will change to show information for that track.
8. Change the sampling rate for each track to "9600". Leave all other Track Parameters at their defaults.
9. When you're done, close the Audio Track Parameters requester by clicking the close gadget in the upper left corner of the requester.

Your Time Line Cue List window should now look something like the following:

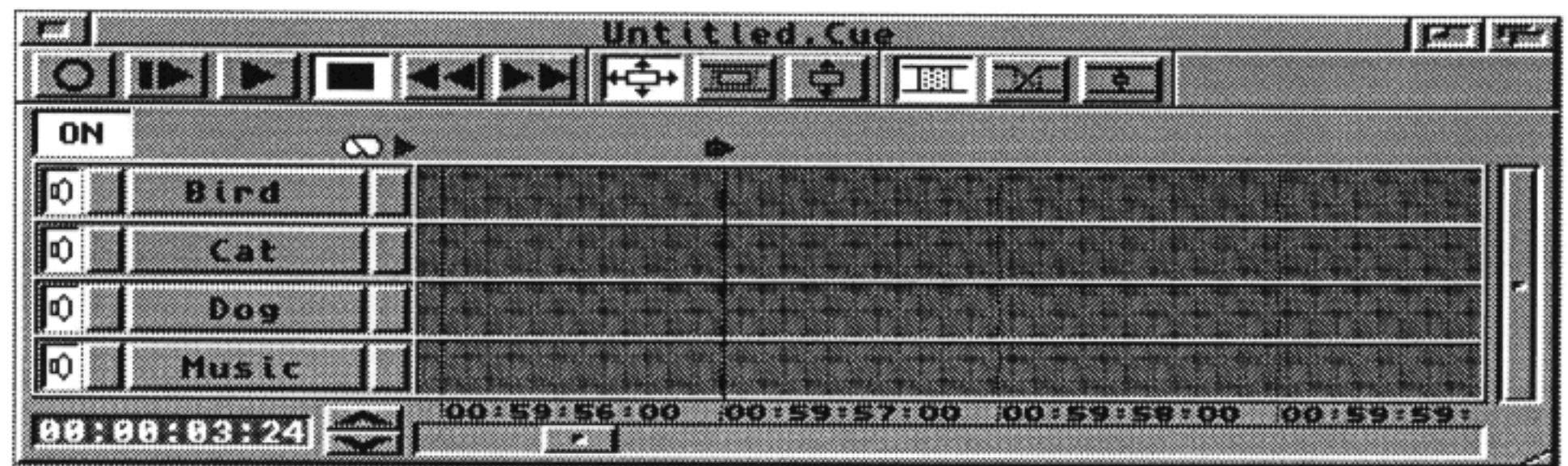


Figure 6-5.

Four Tracks Named for Tutorial

Save the Cue List

1. The work you do on your Cue List in the Time Line Cue List is kept in your Amiga's volatile memory. If you turn off your Amiga your Cue List will vanish forever unless you have saved it to a hard disk or floppy disk.

NOTE It's extremely important to save your Cue List often. That way if you have a power interruption, a system failure, or turn off your computer, you won't lose hours of work.

2. Save your Cue List now by using the Save As command in the Cue List menu. When you use the Save As command it will bring up the Cue List Save File requester. Unless you change the default directory, it will be looking in the Studio16_3:CueLists/ drawer.
3. Type "Cartoon" in the File field and click the OK button. The Cue List will be saved as "Cartoon.cue".
4. So far our Cartoon Cue List just contains information about the four tracks, the Start flag, and the start and end time boundaries for the Time Line Cue List. Now comes the fun part -- adding Audio Entries!

Add Audio Entries

It's important to know that Cue Lists do not contain any sound samples. While finished Cue Lists do contain information about when to play samples, the sample data is stored separately on your hard drive. The Time Line Cue List represents samples with rectangular Audio entries. Audio entries store:

- Location of the samples on your hard drive
- Time to trigger samples
- Instructions to non-destructively crop or fade samples

Adding Audio entries is a breeze. All you have to do is drag samples from Sample List onto Audio tracks.

Dragging and Dropping Entries

1. Open Sample List by choosing the SampleList command in the Applications menu. Sample List shows multiple directories from which you can drag sounds. For this tutorial we'll access the Samples directory as shown.

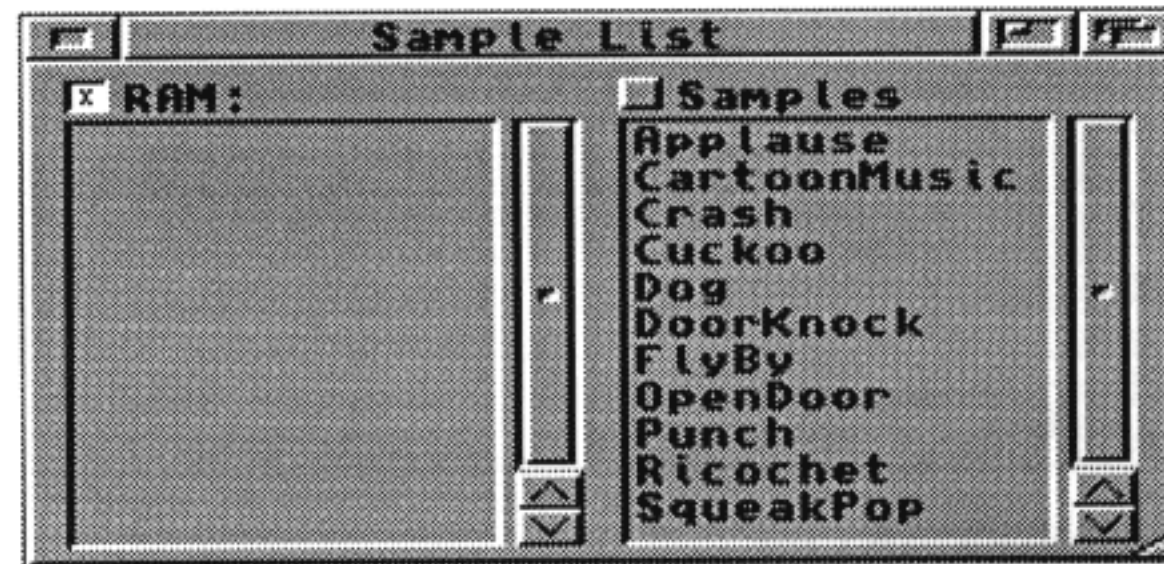


Figure 6-6.

Sample List

2. If the Samples directory is not showing in Sample List, make Sample List the active window by clicking its title bar. Then choose the Add New Path command from the Sample List menu to open the Select New Path requester.
3. Select the Samples directory, located in the Studio 16 drawer, and then click the OK button. Now Sample List should show the Samples directory, as shown above.
4. Lets start by dragging the Applause sample from the Samples directory in the Sample List. Click Applause (in Sample List) with the left mouse button. Keep the left mouse button down and move the mouse. The sample name will attach itself to your mouse pointer. Move the mouse pointer to the right of the Blue Start Flag anywhere over the Bird track and release the mouse button. Applause will appear on the track.

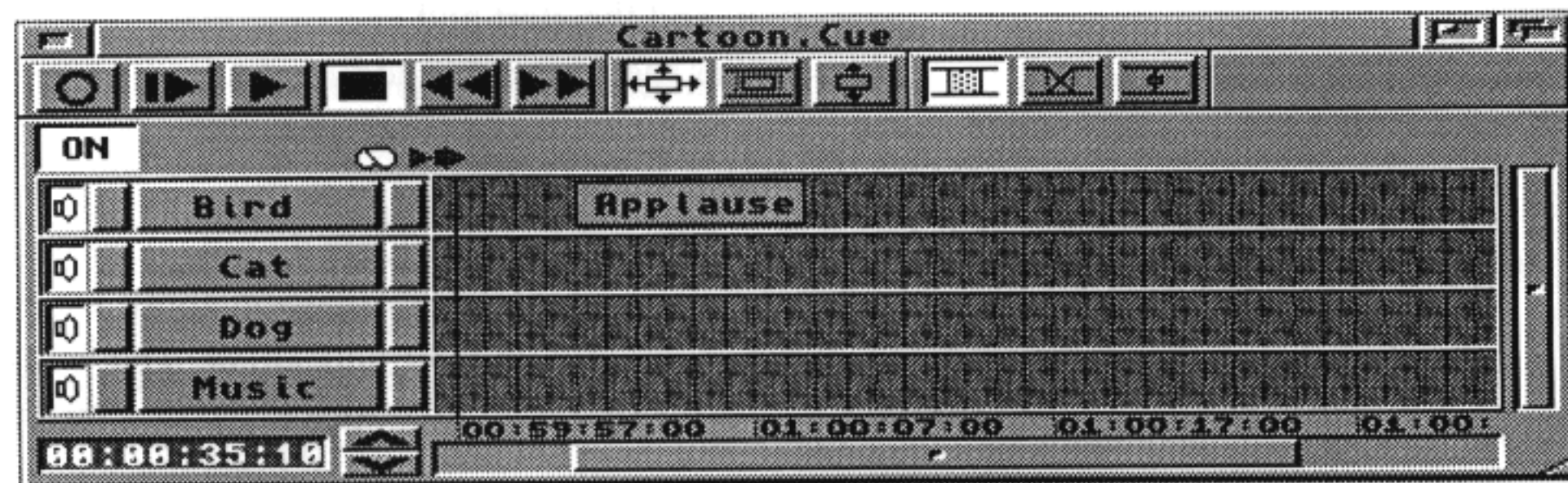


Figure 6-7.

Time Line Cue List with Applause Entry On Bird Track

5. Now drag the rest of the samples from Sample List onto the Time Line Cue List as follows. Drop them anywhere on the track to the right of the Blue Start Flag, but try not to overlap them. If they overlap, just click and drag them down the time line, or delete them and drag and drop them in again.

Track 1	Bird	Applause, FlyBy, SqueakPop
Track 2	Cat	DoorKnock, OpenDoor, Cuckoo
Track 3	Dog	Dog, Punch
Track 4	Music	Ricochet, CartoonMusic, Crash .

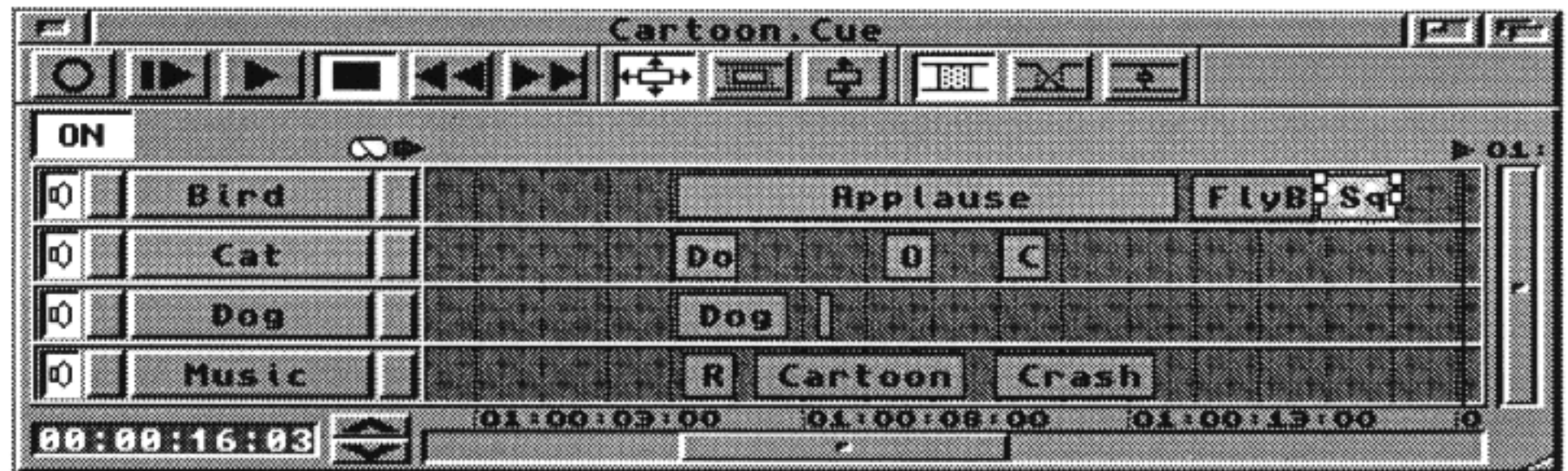


Figure 6-8.

Time Line Cue List with All Entries Added

Just to demonstrate something, we have a minor problem. The Applause entry is on the wrong track. It should really be on track 4. Not to worry. Not only can you drag samples from Sample List onto Audio tracks in the Time Line Cue List, but you can also drag Audio entries between Audio tracks on the Time Line Cue List.

6. Drag the Applause Audio entry from track 1 to track 4 with the mouse.
7. Use the A-W shortcut to save the Cue List. It's a good idea to save often.

Listen to the Cue List

Let's see what all these Audio Entries sound like.

1. Click the Play-From-Start button. It's the second transport from the left in the upper left corner. You should hear some kind of cacophony. A glorious racket. Don't worry, we're not done yet.
2. Click the Stop button. It's the fourth from the left in the upper left corner.

NOTE If you do not hear the samples play, drag the samples along the time line, to the right of the Blue Start Flag by 8 seconds.

3. If you can't see any of the Audio entries any more, scroll or zoom the Time Line Cue List. There's a horizontal slider at the bottom of the Time Line Cue List window. Slide it to the left or right until you can see all the entries.

You can also click the Zoom buttons to zoom in and out on the Time Line Cue List view. The Zoom buttons are just left of the horizontal scroll bar.

Move the Entries

Now that you have all of your audio entries in the Cue List you need to move them to the start times our imaginary producer gave us. Here are those times again:

Sample Name	Start Time
DoorKnock	01:00:06:07
Dog	01:00:07:03
OpenDoor	01:00:08:21
FlyBy	01:00:09:10
Ricochet	01:00:10:02
Punch	01:00:10:25
Cuckoo	01:00:11:07
CartoonMusic	01:00:13:28
Crash	01:00:16:16
Applause	01:00:18:07
SqueakPop	01:00:24:26

To move an Audio entry in time, just drag it left or right. If you drag past the left or right edge of the Time Line Cue List, the Time Line Cue List will scroll. As you move it, you'll see its start time displayed in the upper right area of the Time Line Cue List window, called the Text area. Try dragging an Audio Entry left and right just to get a feel for it.

Another way to move an Audio entry is by entering a time in the Audio Event Parameters requester. Since we have exact times from our imaginary producer, this is the method we'll use.

1. Double-click the DoorKnock Audio entry to open its Audio Event Parameters.
2. Enter the time from the Producer's list, 01:00:06:07, into the Start Time field.



Figure 6-9.

DoorKnock - Audio Event Parameters

3. Hit return on your keyboard, then click OK. The DoorKnock Audio entry now begins where it should.

NOTE An "Overlap Contention Requester" will appear if you cause one sample to be moved on top of another. If this occurs, click the Undo Last Edit option and then move the sample out of the way.

4. Now change the start times for each of the other Audio entries in the same way. Double click each of the other Audio entries and enter their start times from the list before. When you're done, close the Audio Track Parameters requesters by clicking OK.

NOTE You can skip the above step, by opening the Tutorial_A.cue file from the Studio16_3:CueLists\ drawer. Tutorial_A includes all the tutorial samples at their correct start times. You can then continue with the Crops, Fades and Edits section of this tutorial.

5. Now save the Cue List again. It's a good idea to save every time you make major changes.

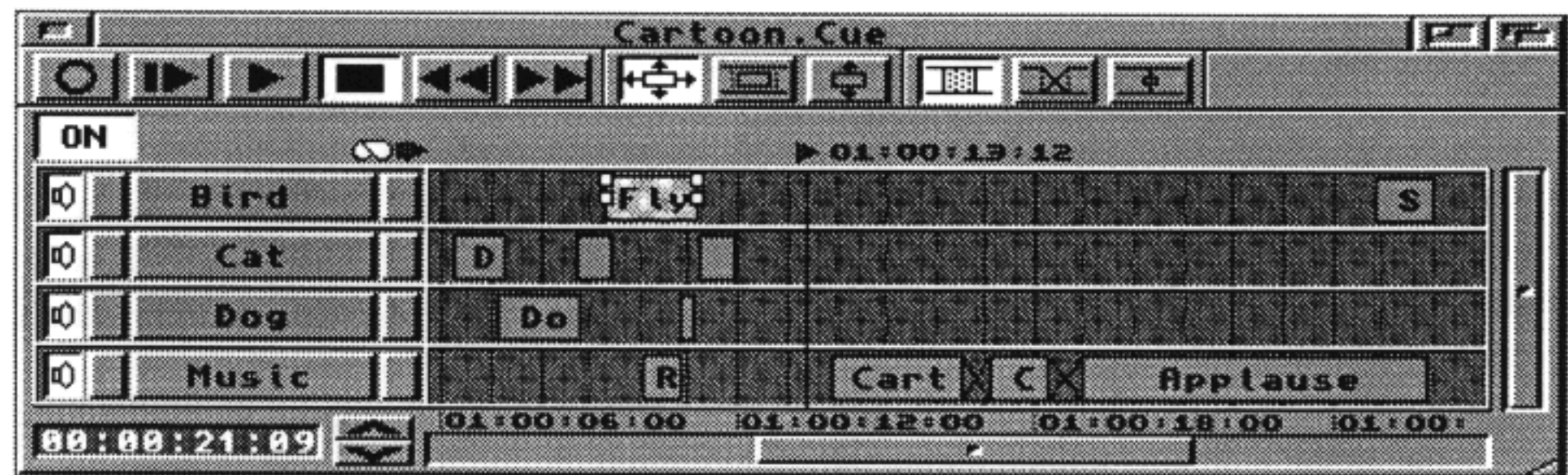


Figure 6-10.

Time Line Cue List with Moved Entries

You might notice that some of the Entries overlap. Where CartoonMusic and Crash overlap you'll see that their color has changed and there is an "X" shape. The "X" signifies a real time cross fade. A cross fade is where the end of one Audio Entry fades out while the beginning of the next Audio Entry fades in.

Any time you move one Audio entry over another on the same track, the Time Line Cue List automatically creates a cross fade between the two Audio entries. Making cross fades is so easy in the Time Line Cue List that you just made some without even trying.

Crops, Fades and Edits

Go ahead and use the Play-From-Start button again to listen to the Cue List. It should now sound close to the soundtrack we want for the cartoon scene.

But there are still a few refinements we need to make. Some of the entries need to be shortened, some of the cross fades need to be changed, we need to add more Cuckoo entries, and we need to fade the end of the Applause entry.