The Sequence Editor

General enhancements

The Sequence Editor can now edit many more sequence parameters and control the editing with much more precision. A number of improvements also make it easier and faster to use.

Overview of new features and enhancements

The Sequence Editor now allows you to cut and paste to any track in any sequence. You can change note pitches, durations, velocity and all real-time effects values in the whole sequence or in only a selected segment. An Edit Filter filters designated pitches, durations and real-time effects values when making these changes.

You can move directly between the Sequence Editor and the Recorder Display. You can also undo editing or toggle between the last and next-to-last version of an edited sequence. Complete sequence file management—saving, erasing and recalling sequences from any catalog in the system—can be done from the Sequence Editor.

These and other enhancements are described on the following pages.

Sequence Editor Display
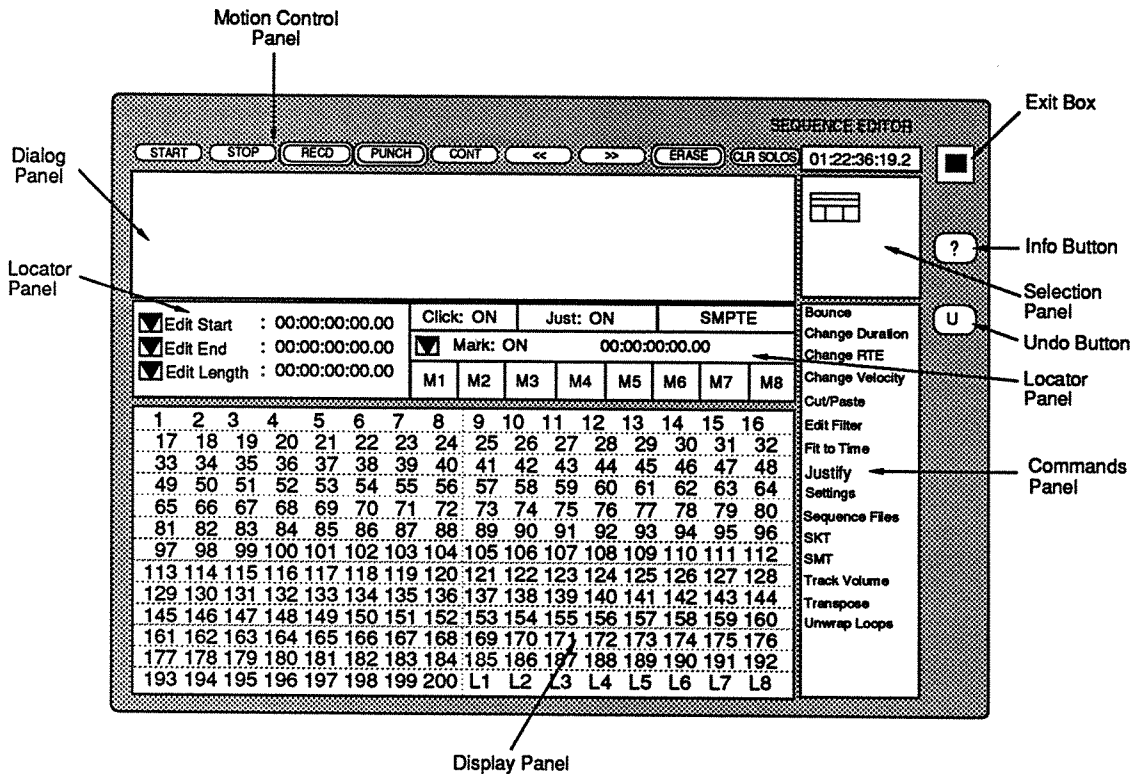
Moving between the Sequence Editor and the Recorder Display

You can move between the Sequence Editor and the Recorder Display without passing through the Main Menu.

From the Sequence Editor

■ Click the Recorder Display icon in the Selection panel.

The Recorder Display replaces the Sequence Editor.

From the Recorder Display

■ Press Shift-. (Hold the Shift key and press the Period key).

The Sequence Editor replaces the Recorder Display.

The Undo button

When editing a sequence, you may find that the results are not as expected, or you may want to compare the latest edit with the immediately preceding version. You can retrieve the version before the last edit or toggle between the edited and pre-edit versions using the Undo button—the button labeled (U) located to the right of the Command panel.

1. Click the Undo button.

    The latest version of the sequence is replaced by the previous version.

2. Click the Undo button again.

    The latest version returns.

In order for the Undo button to work, the top level of your current device must have space equivalent to twice the size of the current sequence.

The undo function can be turned off from the Settings dialog.

The Info button

The Sequence Editor Info button (?) has been improved to make it more like the keyboard control panel INFO button. If you click Info (?) and then START on the Sequence Editor screen, the number of notes available for recording is displayed.

SMPTE improvements

When a SMPTE signal is lost temporarily, the Synclavier calculates a speed from the last signals received and continues or "coasts" until valid SMPTE signals are again received. The length of time that the Synclavier will do this can be set from 0 to 5000 ms. You adjust this parameter by setting the Coast Msec: number field on the Sequence Editor Settings dialog.

After a loss of SMPTE signal, the Synclavier may be slightly off from the SMPTE time code. You can either set it to resynchronize, which may result in a slight interruption in the sequence; or you can set it to continue slightly off and preserve the integrity of the sequence. You do this by setting the SMPTE Resync: switch on the Sequence Editor Settings dialog to ON or OFF.

Voice check

When there are more voices called for in a sequence than there are voices in your system, some of the notes do not sound. You can turn on a voice check function from the Sequence Editor Settings dialog which indicates on the keyboard display window the beat on which such dropouts first occur. Additional dropouts are shown each second. If the dropouts cease, the display returns to counting beats after five seconds.

Mark point improvement

You can now use the starting time of the first note on any track as the mark point.

1. Set the Mark ON/OFF switch to TRK.

2. Click on the desired track number in the track display.

   The starting time of the first note on the selected track is placed in the Mark time field.

Entering time values

The current time of the sequence is shown in the time display at the upper right hand corner of the Sequence Editor. Other time display fields appear in the Locator panel. The time in all of these time fields can be displayed in any of several different formats.

- seconds
- minutes
- beats (clicks)
- measures and beats
- SMPTE time code
- feet and frames

The Time Display Format switch on the Locator panel shows the current format. To change the format:

■ Step or scroll the Time Display Format switch through the different formats.

   The current time at the upper right of the screen and all of the time fields in the Locator panel change to the new format.

SMPTE time code is displayed in non-drop mode (30 frames per second) by default. To change to other SMPTE modes (drop-frame, 25- or 24-frames per second):

1. Select the Settings command from the Commands panel.

   The Settings dialog appears in the Dialog panel with the SMPTE mode switch on the right side.

2. Set the SMPTE mode switch to the desired SMPTE mode.

Entering edit times

You can enter an edit time in any of the time display formats.

1. Click on the edit time value to be changed.

2. Enter a new value in one of three ways.

   • Drag a value from a memory button or another time display.

   • Step a segment of the time display to the desired value.

   • Type in a new value.

When typing in time values, zeros to the right of the decimal point may be omitted. Zeros to the left of a colon may be omitted where indicated below. Colons may always be omitted.

format	default value	enter value
beat	1.00	[beat #] [period] [fraction]
*meas/beat	0:1.000	[meas #] [space] [beat #] [period] [fraction]
**SMPTE	00:00:00:00.00	[hours] [min] [sec] [frames] [period] [bits]
***feet/frames	0:00.00	[feet] [space] [frames] [period] [fraction]
seconds	0.000	[seconds] [period] [fraction]

* If beat or click 1 is desired, enter only the measure number.

** Zero values for hours and minutes can be omitted.

*** Zero value for feet can be omitted.

New Commands

Edit Filter—*Defining the scope of editing changes*

When executing certain editing commands, you can use the Edit Filter to define the pitches, durations or real-time effects to be affected by the editing.

For example, if the loudness of a timbre is controlled by velocity, you can increase the volume of only the softest notes in a passage by setting the Edit Filter so that the Change Velocity command affects only those notes with velocity values below a certain level.

The Edit Filter works with the following commands:

command	active filter settings
Change Duration	pitch, velocity, duration
Change Velocity	pitch, velocity, duration
Cut	pitch, velocity, duration, real-time effects, controller values
Transpose	pitch, velocity, duration

Each of the above commands has a Filter switch at the lower center of the Dialog panel. By default, the switch is set to OFF.

Using the Edit Filter is a two-step procedure.

1. Set the Edit Filter according to instructions on the opposite page.

2. Select the command with which it is to be used and toggle the Filter switch to ON.

When the command is executed, the designated pitches, velocities, durations and/or real-time effects are filtered.

When you use the Edit Filter with a cut command, **everything** is cut from the designated region, but only pitches, velocities, durations and/or real-time effects defined in the Edit Filter are placed onto the clipboard or in the designated file.

When you use the Edit Filter with a move command, only those pitches, durations and/or real-time effects defined in the Edit Filter are moved to the clipboard or designated file.

Setting the Edit Filter

1. Click on Edit Filter in the Commands panel.

   The Edit Filter dialog appears in the Dialog panel.

   The filter is set by default to allow all pitches, all velocities, all durations and all controller values to be affected by the selected operation.

2. Step each of the items in the Dialog panel to view the available options.

3. Type in values as needed, or step them higher or lower.

   At any time you can click the RESET FILTER button at the bottom of the Dialog panel to reset all filter items to their default settings.

4. When finished, click DONE at the bottom left of the Dialog panel or another command from the Commands panel.

   The filter settings are stored for use when an editing command is executed.

Change Duration—*Changing the length of notes*

You can adjust the duration of all the notes or sounds of any selected track or region. You can set the duration of each note in the selected region to a single value, or you can scale the notes longer or shorter. You can add a value to each note; or, you can assign increasing or decreasing values throughout the region. Values are displayed in the selected time display format.

1. Select a region for change by setting Start and End times.

2. Solo the track(s) to be changed.

3. Click on Change Duration in the Commands panel.

    The Change Duration dialog appears in the Dialog panel with the Duration change field (the word "durations") in the upper left corner.

4. Step to the desired selection in the Duration change field as shown on the opposite page.

5. Set the values by typing them in or stepping each one up or down.

6. Set minimum or maximum values if desired.

7. If you want to use the Edit Filter, toggle the Filter switch at the bottom of the Dialog panel to ON. (See "Edit Filter" above.)

8. Click the CHANGE DUR. button at the lower left of the Dialog panel or the CANCEL button to quit.

    The changes are made on the region and tracks selected.

    If a minimum value is set, all notes with lower values are raised to the minimum. If a maximum value is set, all notes with greater values are reduced to the maximum.

Duration change field selections

selection	result
Set durations to	Duration of each note set to constant value.
Scale durations by	Durations of notes scaled up or down a percentage of the current values with minimum or maximum values if desired.
Add to current value	A value is added to the duration of notes with minimum or maximum values if desired. (The default minimum and maximum values of 0.000 allow any duration value to pass.)

Slope
    from:
        to:
	Increasing or decreasing values are assigned to the duration of notes.

Change RTE—*Changing real-time effects values*

You can edit selected real-time effects with the Change RTE command.

1. Select a region for change by setting Start and End times.

2. Solo the tracks to be changed.

3. Click on Change RTE in the Commands panel.

   The Change RTE dialog appears in the Dialog panel with the default RTE to change (Pedal 1) in the upper left corner and the RTE change field just below it.

4. Step or scroll Pedal 1 to select another real-time effect to change.

   Selections include Pedal 1, Pedal 2, Mod Wheel, Breath Controller, Pitch Bend and Ribbon.

5. Step to the desired type of change in the RTE change field as shown on the opposite page.

6. Set values for change by typing them in or by stepping each one up or down.

7. Set minimum or maximum values if desired.

8. Click the CHANGE RTE button at the lower left of the Dialog panel or the CANCEL button to quit.

   The changes are made on the region and tracks selected.

   If a minimum value is set, all notes with lower values are raised to the minimum. If a maximum value is set, all notes with greater values are reduced to the maximum.

selection	result
Set RTE to	Level of the selected RTE set to a constant value.
Scale RTE by	Levels of the selected RTE scaled up or down a percentage of the current values with minimum or maximum values if desired.
Add to current value	A value is added to the levels of the selected RTE with minimum or maximum values if desired.

Slope
    from:
        to:
	Increasing or decreasing values are assigned to the real-time effect.

Change Velocity—Changing velocity values

Velocity values of selected notes or sounds can be adjusted using the Change Velocity command.

1. Select a region for change by setting Start and End times.

2. Solo the tracks to be changed.

3. Click on Change Velocity in the Commands panel.

    The Change Velocity dialog appears in the Dialog panel with the Velocity change field (the word "Velocities") in the upper left corner.

4. Step to the desired change on the Velocity Change field as shown on the opposite page.

5. Set values for change by typing them in or by stepping each one up or down.

6. Set minimum or maximum values if desired.

7. If you want to use the Edit Filter, toggle the Filter switch at the bottom of the Dialog panel ON. (See "Edit Filter" above.)

8. Click the CHANGE VEL. button at the lower left of the Dialog panel to make the desired changes, or the CANCEL button to quit.

    The changes are made on the region and tracks selected.

    If a minimum value is set, all notes with lower values are raised to the minimum. If a maximum value is set, all notes with greater values are reduced to the maximum.

Velocity Change field selections

selection	result
Set velocity to	Velocity set to a constant value.
Scale velocity by	Velocity scaled up or down a percentage of the current values with minimum or maximum values if desired.
Add to current value	A selected value is added to current velocity values with minimum or maximum values if desired.

Slope
   from:
     to:
	Increasing or decreasing values are assigned to velocity.

Cut/Paste—Pasting to any track

When cutting and pasting, you can now paste the notes of any track to any other track. That is, you can cut a section of one track, placing the notes on the clipboard or in a designated file, and then paste that section onto another track of the same or a different sequence.

Before you execute the Paste, Fill or Merge command you must solo a destination track or tracks. If you do not, a message appears:

ERROR: Tracks must be soloed for paste.

If you solo more tracks than you cut, the additional tracks are filled by repeating part or all of the paste beginning with the first track.

If you solo fewer tracks than you cut, only the soloed tracks are filled, and the additional tracks in the clipboard or file are ignored.

Fit to time—*Fitting a sequence to a selected length of time*

You can expand or compress any section of the current sequence to fit a designated length of time. You can leave the durations of the individual sounds or notes unchanged, letting them overlap if the sequence is compressed or inserting silence between them if the sequence is expanded. Or you can choose to have them scaled to match the time adjustment.

When you use this feature, the starting times of all sounds in the selected region are adjusted. However, the click of the internal digital metronome remains at its original setting and speed.

If you want to use the sequence where the relationship of click to sound is important, you should create a click track of quarter notes justified to the original beat before doing the fit-to-time operation. (See the section "Meter, time and tempo" in the *Memory Recorder* manual.) The clicks of the click track will be affected by the fit-to-time operation along with the other tracks in the selected region. Thus a click generated by the click track maintains its relationship to the sequence sounds.

1. Select a region by setting Start and End times in the Locator panel.

2. Click on Fit to Time in the Commands panel.

    The Fit-to-Time dialog appears in the Dialog panel.

3. Enter a new End Time, a new Region Length or a percentage as shown below.

option	result
new End Time	Changes End Time set in Locator panel. The Region Length is automatically adjusted to fit the new End Time.
new Region Length	Changes the Region Length. The End Time set in the Locator panel is automatically adjusted to fit the new Region Length.
percentage to scale	Changes the Region Length by a percentage of the Region Length defined by the Start and End times in the Locator panel. The Start Time remains the same and the End Time changes to fit the new Region Length.

Fit to Time—Fitting a sequence to a selected length of time (con't)

4. If you want a gradual change, toggle Fit Instantly to Fit Gradually. (See fit-to-time options on the opposite page.)

5. If you want the durations of the notes or sounds to be scaled to match the adjustment, toggle the Scale Durations field to YES. (See fit-to-time options on the opposite page.)

6. If you want the change to continue beyond the selected region, toggle the Stay at new speed switch to YES.

7. Click the FIT TO TIME button on the Dialog panel.

   The speed and length of the region are adjusted according to the options selected.

8. Listen to the sequence. Use the Undo button to return to the previous version if the results are not what you expected.

Fit-to-time options

option	result
Fit Instantly	Selected changes occur exactly at the Edit Start time set in the Locator panel.
Fit Gradually	Sound starting times are adjusted gradually over the entire edit region, speeding up if time is compressed or slowing if time is expanded.
Scale Durations: Yes	The duration of each sound is scaled to the selected time compression or expansion so that no silences or overlaps occur.
Scale Durations: No	The duration of each sound is unchanged from the original. When time is compressed, sounds may overlap; when time is expanded, gaps may occur between sounds.
Stay at new speed: Yes	The rest of the sequence after the changed region continues at the new speed.
Stay at new speed: No	The sequence returns instantly to the original speed at the end of the changed region.

Justify—Justifying a region

With the Sequence Editor Justify command, you can justify notes or sounds that have been recorded slightly ahead or behind the beat. The command allows you to justify some notes without justifying others, so that the "live" rhythmic feeling is not lost. For example you might leave notes close to the beat unjustified while justifying notes further off the beat.

1. Select a region for change by setting Start and End times.

2. Solo the tracks to be changed.

3. Click on Justify in the Commands panel.

   The Justify dialog appears in the Dialog panel.

4. Set a Click Multiplier.

   Inaudible clicks are added to subdivide each click by the selected number. Notes are justified to each of these subdivisions.

5. Set justification values by typing them in or by stepping each one up or down. See the information and illustrations opposite.

6. If you want to use the Edit Filter, toggle the Filter switch at the bottom of the Dialog panel ON. (See "Edit Filter" above.)

7. Click the JUSTIFY button at the lower left of the Dialog panel to make the desired changes, or the CANCEL button to quit.

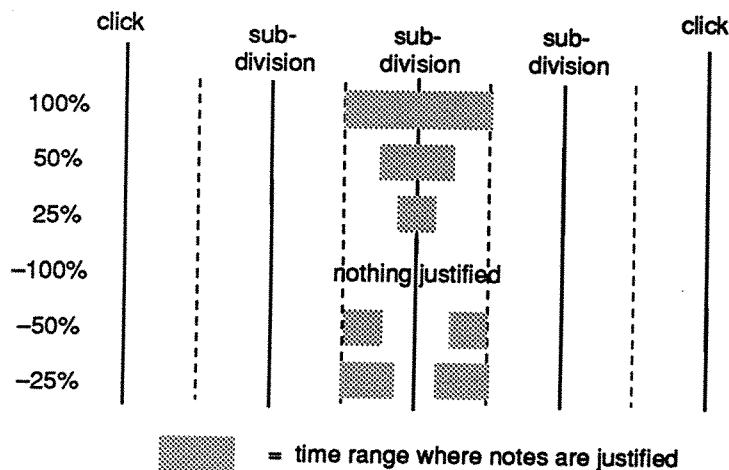   The changes are made on the region and tracks selected.

Justification values

Percent to Justify (1-100%)
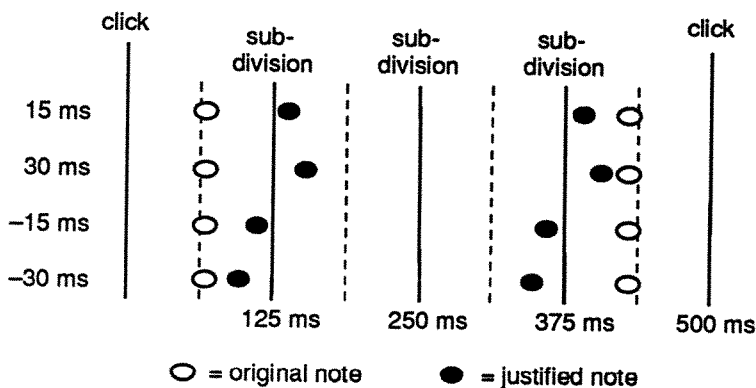Sets the amount of justification to be applied.

O = original note   ● = justified note
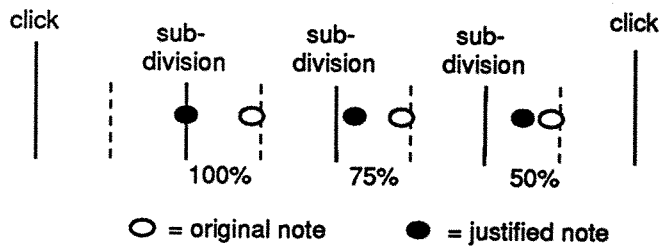
Effective Range (–100% to 100%)
Selects the time range in which notes or sounds are to be justified.

= time range where notes are justified

Grid Offset (–1000 ms to 1000 ms)
Selects an offset for justification in relation to the click.

O = original note   ● = justified note

Sequence Files—*Managing sequence files*

The Sequence File command on the Commands panel sets up a sequence file management dialog in the Dialog panel. You use this dialog to save the current sequence to any catalog or device on your system. You also use this dialog to recall or to erase any sequence in your system so long as the sequence file type is a sync file. (See the section "Files, catalogs and devices" in the *Organizing and Storing Sounds* manual.)

1. Click on Sequence Files in the Commands panel.

    The Sequence Files dialog appears in the Dialog panel with Recall Sequence as the default Sequence field setting.

2. Step to the desired function on the Sequence field. Options include Save Sequence, Unsave Sequence or Recall Sequence.

3. Name the sequence to be saved, unsaved or recalled. Click on a sequence number at the top of the Dialog panel or type in the filename or treename of the sequence file.

4. Click the SAVE, UNSAVE or RECALL SEQUENCE button at the lower left of the Dialog panel to initiate the selected function.

    The selected sequence is saved, unsaved or recalled.

    If you are saving a sequence to an existing file of the same name, the SAVE SEQUENCE button is replaced by REPLACE SEQ. and a message appears:

    WARNING: File already exists, saving will replace it.

    Click the REPLACE SEQ. button.

    The selected sequence is replaced.

5. If you want to cancel the operation, click the CANCEL button or another item from the Commands panel to quit the Sequence Files dialog.

Saving a sequence

When you save a sequence file, you can give it a name or you can assign it to one of the eight numbered sequence files. If you give it a name of your choice, spaces and the following characters cannot be used.

$$? \ ! \ : \ ; \ , \ / \ \backslash \ < \ > \ + \ = \ \% \ \& \ * \ | \ @$$

If you want to save it as a numbered sequence, click one of the eight numbered buttons at the top of the Dialog panel. These buttons correspond to sequence file names and buttons on the Synclavier keyboard control panel as shown below.

filename	keyboard sequence button #	as it appears in Sequence Directory
.sq0data	1	<SEQ #1>
.sq1data	2	<SEQ #2>
.sq2data	3	<SEQ #3>
.sq3data	4	<SEQ #4>
.sq4data	5	<SEQ #5>
.sq5data	6	<SEQ #6>
.sq6data	7	<SEQ #7>
.sq7data	8	<SEQ #8>

If you designate only a name when you save a sequence, the sequence is saved to the current catalog. If you want to store it in another catalog, type in the entire treename. (Treenames are explained in the section "Files, catalogs and devices" in the *Organizing and Storing Sounds* manual.)

When you save a sequence from the Sequence Editor, a sequence file the size of the current sequence is created. A pre-existing sequence file is not required.

When you replace a numbered sequence file that is too small for the current sequence, the file is enlarged to fit the sequence as long as there is enough room in the current catalog. The existing sequence file is not reduced in size if the current sequence is smaller.

NOTE: When saving from the Synclavier keyboard, pre-existing sequence files of adequate size are still required.