Sounds of the Synclavier

QT-02-0788

The sounds of the Synclavier

New England Digital has created a library of sounds that range from the most authentic instrumental sounds available today to an array of sounds you've never heard before.

The Timbre Directory

The first item on the list of displays on the Welcome Menu is the Timbre Directory. Timbre (pronounced **tam**-ber) is another name for musical sound. The Timbre Directory lists all the sounds that are available right now for performance.

1. At the terminal, select the Timbre Directory either by typing

   a

   or by pressing the Return key.

2. Look at the Timbre Directory. Notice that the first name listed in the directory,

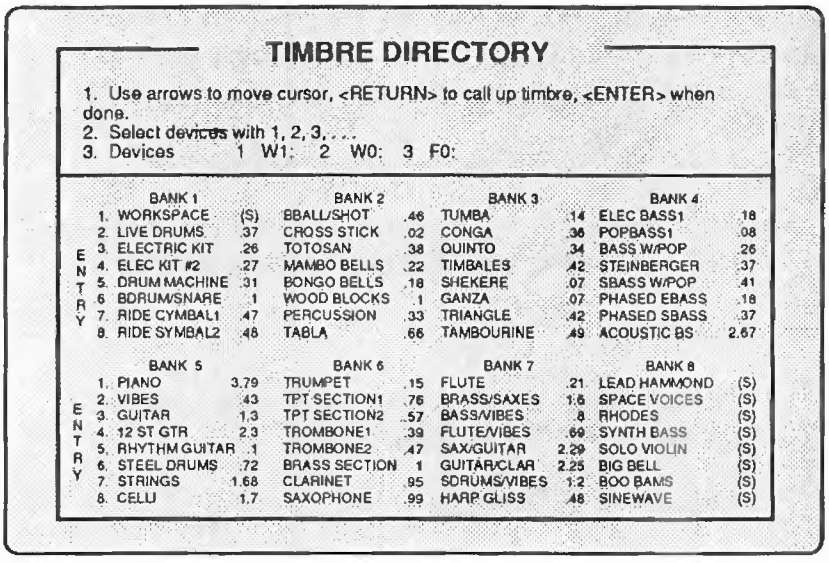
   workspace

   is highlighted and followed by a flashing cursor. You can move the cursor in any direction by pressing the arrow keys on the terminal keyboard.

3. Look at the Timbre Directory and find the electric bass timbre named

   elec bass1 .18

   The number, expressed in megabytes, following the name indicates the amount of **polyphonic sampling memory** (poly memory) required by the timbre.



TIMBRE DIRECTORY

1. Use arrows to move cursor, <RETURN> to call up timbre, <ENTER> when done.
2. Select devices with 1, 2, 3, . . .
3. Devices 1 W1: 2 W0: 3 F0:

ENTRY

	BANK 1		BANK 2		BANK 3		BANK 4	
1.	WORKSPACE	(S)	BBALL/SHOT	.46	TUMBA	.14	ELEC BASS1	.18
2.	LIVE DRUMS	.37	CROSS STICK	.02	CONGA	.36	POPBASS1	.08
3.	ELECTRIC KIT	.26	TOTOSAN	.38	QUINTO	.34	BASS W/POP	.26
4.	ELEC KIT #2	.27	MAMBO BELLS	.22	TIMBALES	.42	STEINBERGER	.37
5.	DRUM MACHINE	.31	BONGO BELLS	.18	SHEKERE	.07	SBASS W/POP	.41
6.	BDRUM/SNARE	.1	WOOD BLOCKS	.1	GANZA	.07	PHASED EBASS	.18
7.	RIDE CYMBAL1	.47	PERCUSSION	.33	TRIANGLE	.42	PHASED SBASS	.37
8.	RIDE SYMBAL2	.48	TABLA	.66	TAMBOURINE	.49	ACOUSTIC BS	2.67

ENTRY

	BANK 5		BANK 6		BANK 7		BANK 8	
1.	PIANO	3.79	TRUMPET	.15	FLUTE	.21	LEAD HAMMOND	(S)
2.	VIBES	.43	TPT SECTION1	.76	BRASS/SAXES	1.6	SPACE VOICES	(S)
3.	GUITAR	1.3	TPT SECTION2	.57	BASS/VIBES	.8	RHODES	(S)
4.	12 ST GTR	2.3	TROMBONE1	.39	FLUTE/VIBES	.69	SYNTH BASS	(S)
5.	RHYTHM GUITAR	.1	TROMBONE2	.47	SAX/GUITAR	2.29	SOLO VIOLIN	(S)
6.	STEEL DRUMS	.72	BRASS SECTION	1	GUITAR/CLAR	2.25	BIG BELL	(S)
7.	STRINGS	1.68	CLARINET	.95	SDRUMS/VIBES	1.2	BOO BAMS	(S)
8.	CELLI	1.7	SAXOPHONE	.99	HARP GLISS	.48	SINEWAVE	(S)

The sounds of the Synclavier (con't)

Using the arrow keys to recall a timbre

Most of New England Digital's timbres were created by recording **samples** from live instruments. Each timbre usually has a number of samples in it, with each sample stored separately on your Winchester as a **sound file**.

You can use the arrow keys to recall any timbre.

1. Press the right arrow key on the terminal keyboard until the cursor is on the electric bass timbre.

2. Press Return.

   The keyboard display window shows a series of messages, each beginning with

   ```
   LOADING SOUND FILE
   ```

   The computer is copying all the sound files of this timbre from the Winchester disk into poly memory. This is called placing the timbre on the keyboard.

   When all the sound files have been loaded, the bottom of the display window shows

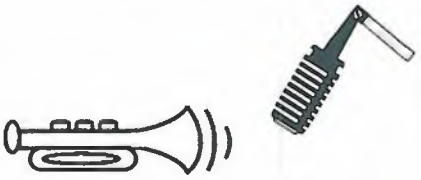
   ```
   ELEC BASS1  .18
   ```

   The timbre on the keyboard is called the **current timbre.**

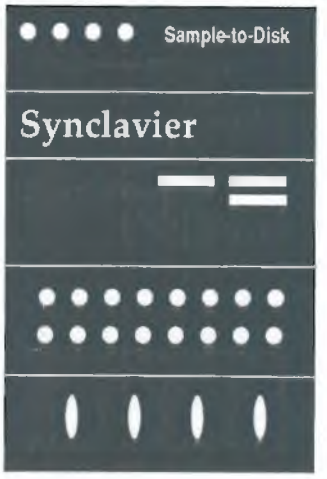
3. Play some notes on the Synclavier velocity/pressure sensitive keyboard. Listen to the sound recorded from a live electric bass.

   Note: If you do not hear any sound, make sure your audio system is properly connected and turned on.

A sampled sound:

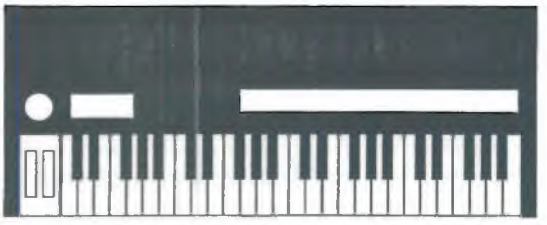


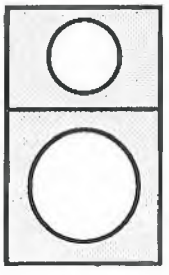
- recorded,



- stored,

- placed on the keyboard.





When you press a key, the original sound is played back.

You can add vibrato, portamento and other effects.

The sounds of the Synclavier (con't)

Using the trackball to recall a timbre

Another kind of sound is synthesized sound. Synthesized timbres are created by using the control knob and buttons on the Synclavier keyboard unit to **dial in** the harmonics and enclose them in a **volume envelope:** an attack, an initial decay, a sustain portion and a final decay. Frequency modulation, stereo and vibrato may also be added.

You can use the trackball to recall any timbre.

1. Roll the trackball to move the trackball cursor (crosshair) to the timbre named

   lead hammond (s)

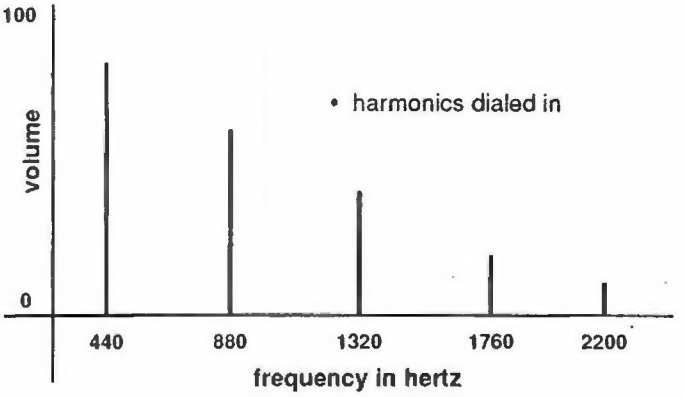
   The (s) after the timbre name stands for **synthesized.**

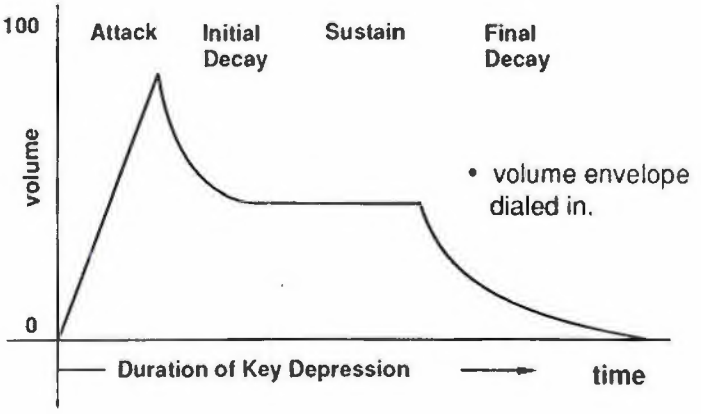
2. Click (press and release) the large trackball button.

   A copy of this timbre is placed on the keyboard and replaces the previous current timbre.

3. Play some notes on the keyboard and listen to the sound of the synthesized Hammond organ.

A synthesized sound:





- Add frequency modulation, vibrato, stereo, portamento and other effects.

Using the keyboard control panel to recall a timbre

Notice how the timbres are arranged in the Timbre Directory. There are four banks of timbres across the top of the screen and four banks across the bottom. Each bank contains eight entries. Thus, each timbre can be identified by its bank and entry numbers.

You can recall any timbre by using the buttons under TIMBRE/SEQUENCE STORAGE on the fourth panel of the keyboard control panel.

1. Press the button labeled

   BANK

2. Press the numbered button (in the second row)

   5

3. Press the button labeled

   ENTRY

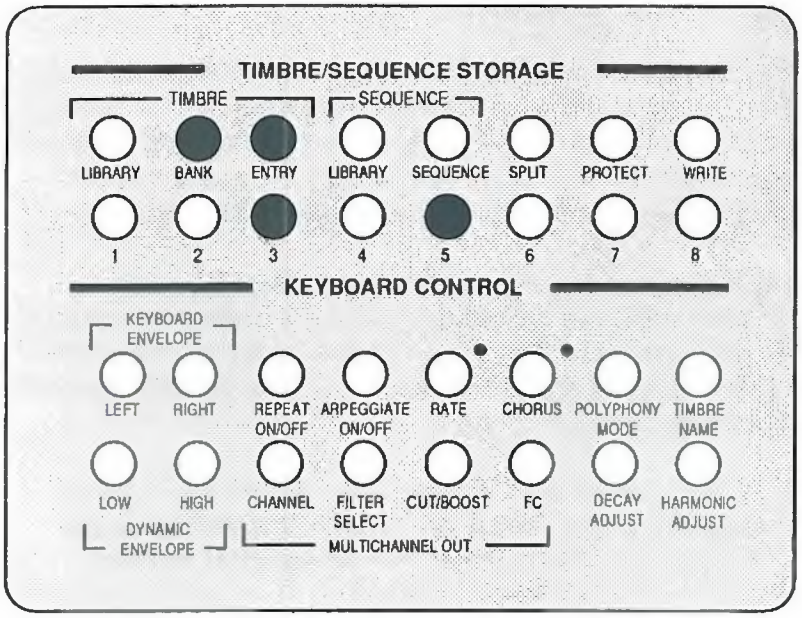
4. Press the numbered button

   3

   The display window shows the LOADING SOUND FILE message and then the name

   GUITAR 1.3

   The third timbre in the fifth bank is now the current timbre. Notice that the screen cursor moved automatically to the selected timbre. Although this procedure for recalling timbres is a bit slower than using the Timbre Directory, there may be times you will want to use it.



Timbre recall buttons

- Press BANK.
- Press a numbered button on the fourth panel.
- Press ENTRY.
- Press a numbered button on the fourth panel.

The sounds of the Synclavier (con't)

What's in a timbre?

A Synclavier timbre has up to four layers of sound. Each layer, called a **partial timbre,** is a separate set of sounds with its own harmonic structure and volume envelope. A partial timbre can be one synthesized sound or up to eighty-eight sound files patched across the keyboard.

Each key of the keyboard can simultaneously activate four sound files or four synthesized sounds or a combination of the two. When you play a note, you can hear all four layers of sound, or you can listen to each partial timbre separately.

1. Using either the Timbre Directory or the keyboard control panel, recall the timbre **flute/vibes** to the keyboard. This timbre has two partial timbres.

2. Press the lighted PARTIAL TIMBRE SELECT button labeled **1** on the first panel.

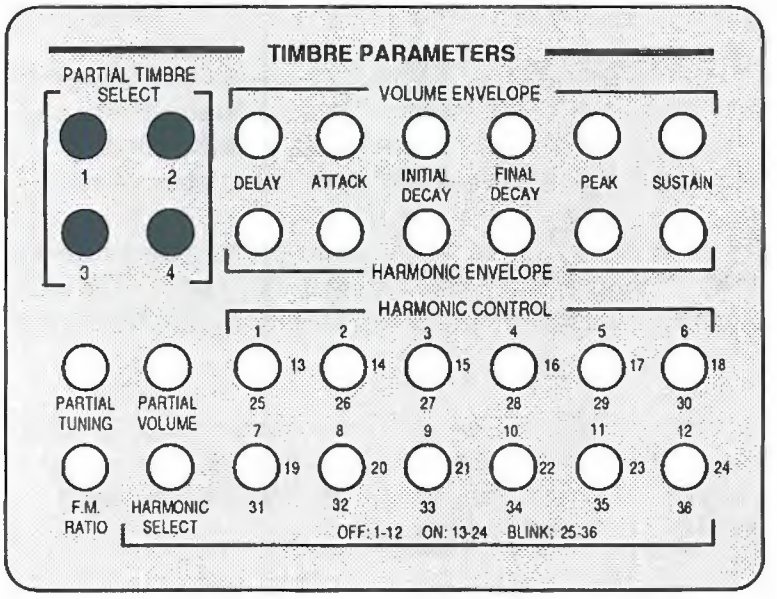
   It blinks. Play a note on the keyboard. You hear only the vibes sound of the first partial timbre.

3. Press the unlit PARTIAL TIMBRE SELECT button **2.**

   It blinks and button **1** is unlit. Play a note on the keyboard. You hear only the flute sound of the second partial timbre.

4. Again, press PARTIAL TIMBRE SELECT button **2.**

   It stops blinking and lights. Play a note on the keyboard and listen to both partial timbres again.



Partial timbre select buttons

- When you press a lit PARTIAL TIMBRE SELECT button, it blinks. You hear only the selected partial timbre.
- When you press a blinking PARTIAL TIMBRE SELECT button, it stops blinking and becomes lit. You hear all partial timbres.
- When you press an unlit PARTIAL TIMBRE SELECT button, it blinks or lights, depending on whether the previously pressed button is lit or blinking.

The sounds of the Synclavier (con't)

Comparing different sounds in a timbre

Each Synclavier timbre has its own characteristic sound. Some have been programmed for **real-time effects** so that you can control the sound with your keyboard touch, the pedal, the mod wheel or the ribbon controller.

Take some time now to recall different sounds to the keyboard. Use the procedures for both the Timbre Directory (with the trackball or arrow keys) and the keyboard control panel.

As you play the keyboard with each new timbre, listen for how the sound changes, depending on how you play the keyboard or use the control devices like the mod wheel or the ribbon controller.

When you have finished listening to the different timbres, press

Enter

to return to the Welcome Menu.

timbre name	listen for
bass w/pop sbass w/pop	The amount of "pop" changes as you change your keyboard attack.
strings celli	The volume changes as you apply more or less pressure after the attack.
trombone1	The pitch of a held note changes as you move your finger up and down the ribbon controller.
space voices	The rate of portamento changes as you change your after-attack pressure.
solo violin	The volume changes as you change your keyboard attack. The vibrato changes as you change your after-touch pressure. A simulated bowing effect is controlled by the mod wheel.