The second line shows the note being played on the keyboard (or scrolled with the Data Entry Control). After selecting a note, the third line displays the primary sample number, and the fourth line displays the secondary sample number associated with the note on line two.

6. Press Yes to erase the zone, or No to cancel the operation. In either case, you will return to the Module Identifier.

4. Copy Zone

This submodule allows zones to be copied into any preset.

1. Activate Preset Definition module.
2. Select Copy Zone (4).
3. Select the preset that contains the zone to be copied, then press ENTER.

```
   COPY ZONE from
P00 Current Preset

Select Source Preset
```

4. Select whether you will copy the primary, secondary, or both samples from the zone, then press ENTER.

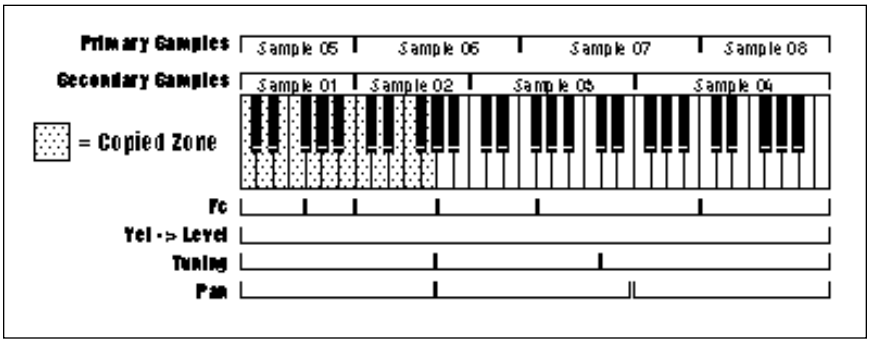
```
   COPY ZONE from
P00 both

Select pri/sec/both
```

! Caution: If the source zone contains no secondary samples and you select both, loading the zone will overwrite both primary and secondary samples in the destination preset.

```
   COPY ZONE from
P00 both C1

  Select Low Key
```

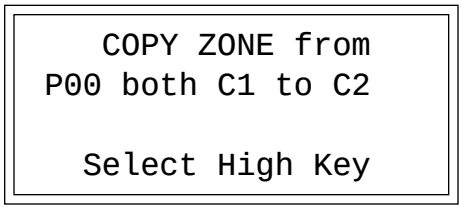


A copied zone consists of all Samples and Dynamic Processing parameters contained in that zone.

5. Select the lowest key of the zone to be copied, then press ENTER. The default is the lowest note of the lowest sample. You can select a different low key in two ways. The Data Entry Control scrolls through the lowest key of each sample on the keyboard. (The Data Entry Control is the fastest selection method if you want the lowest key of the zone to coincide with the lowest note of a sample.) Or, you can use the keyboard to specify any note as the lowest note of the zone.

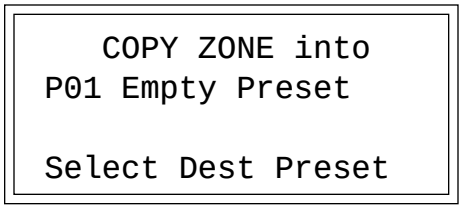
The second line shows the note being played on the keyboard (or scrolled with the Data Entry Control). After selecting a note, the third line displays the primary sample number, and the fourth line displays the secondary sample number associated with the note on line two.

6. Select the highest key of the zone to be copied, then press ENTER. The default is the highest note of the sample that contains the previously specified low note. You can select a different high key in two ways. The Data Entry Control scrolls through the highest key of each sample on the keyboard. (The Data Entry Control is the fastest selection method if you want the highest key of the zone to coincide with the highest note of a sample.) Or, you can use the keyboard to specify any note as the highest note of the zone.



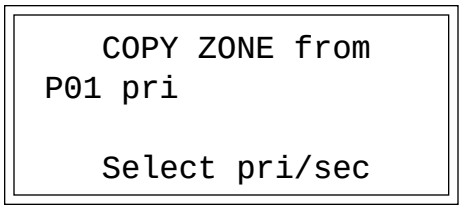
The second line shows the note being played on the keyboard (or scrolled with the Data Entry Control). After selecting a note, the third line displays the primary sample number, and the fourth line displays the secondary sample number associated with the note on line two.

7. Select the preset into which the zone will be copied, then press ENTER. The ESI will default to the lowest numbered empty preset.



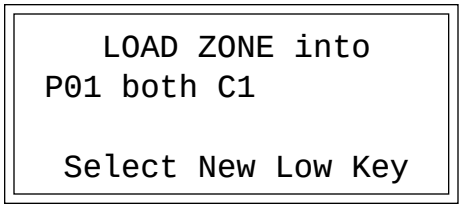
If you select an empty preset, upon pressing ENTER you will be given a chance to rename the preset that the ESI just created. Choose the characters you want to change with the left and right cursor buttons. Select the desired characters by using the ten key pad, Data Entry Control, and/or keyboard. You can also use the up cursor to insert spaces and the down cursor to delete spaces. After renaming is complete, press ENTER.

8. If you selected only primary or secondary samples, select whether you want to load them into the preset as primary or secondary samples. This step allows you to copy primary sample(s) into secondary locations and visa versa. If in step four you selected both samples, the ESI will skip this step, as these samples are always copied into both primary and secondary sample slots of the destination preset.



9. Select the low key where the low key of the zone will be placed, then press ENTER. As you select notes, the display will show the samples mapped into the preset. After loading, the ESI will return to the Module Identifier.

! Caution: When a zone is copied, it overwrites that area of the destination preset.

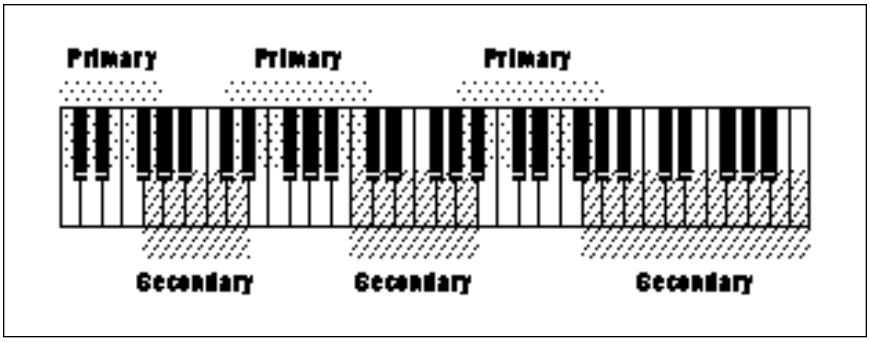


5. Crossfade Switch

This submodule offers several switching and crossfading functions. Velocity Crossfade crossfades between the primary and secondary samples according to how hard you play the keyboard. One sample will become louder as you play harder and softer as you play softer, while the other sample will become louder as you play softer and softer as you play harder. Velocity Switch is similar, but there is a threshold above which one sample plays and below which the other sample plays.

Where keyboard assignments of two samples overlap, Positional Crossfade alters the level (mix) between the two overlapping samples depending on where you play within the overlap range.

★ Tip: Velocity crossfade is often used where the primary sample is a sound played softly and the secondary sample is a sample of the same sound played harder. Velocity crossfade causes the secondary sample to be brought in as you play the keyboard harder, producing a natural response.



Positional Crossfade can be used to create seamless sample boundaries. The overlapping portions of the primary and secondary samples will be crossfaded.

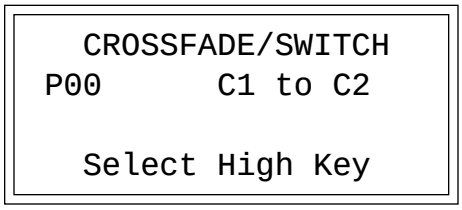
1. Activate Preset Definition module.
2. Select the Crossfade/Switch submodule (5).
3. Select the lowest key of the zone to be crossfaded or switched, then press ENTER. The default is to the lowest note of the lowest sample. You can select a different low key in two ways. The Data Entry Control scrolls through the lowest key of each sample on the keyboard. The Data Entry Control is the fastest selection method if you want the lowest key of the zone to coincide with the lowest note of a sample. Or, you can use the keyboard to specify any note as the lowest note of the zone.

```
  CROSSFADE/SWITCH
P00      C1

   Select Low Key
```

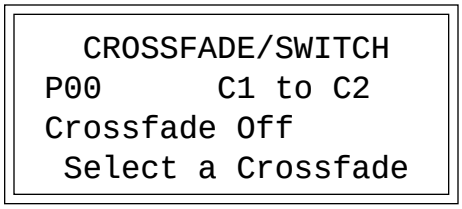
The second line shows the note being played on the keyboard (or scrolled with the Data Entry Control). After selecting a note, the first line displays the zone's crossfade status, the third line displays the primary sample number, and the fourth line displays the secondary sample number associated with the note on line two.

4. Select the highest key of the zone to be crossfaded or switched, then press ENTER. The ESI defaults to the highest note of the sample that contains the previously specified low note. You can select a different high key in two ways. The Data Entry Control scrolls through the highest key of each sample on the keyboard. The Data Entry Control is the fastest selection method if you want the highest key of the zone to coincide with the highest note of a sample. Or, you can use the keyboard to specify any note as the highest note of the zone.



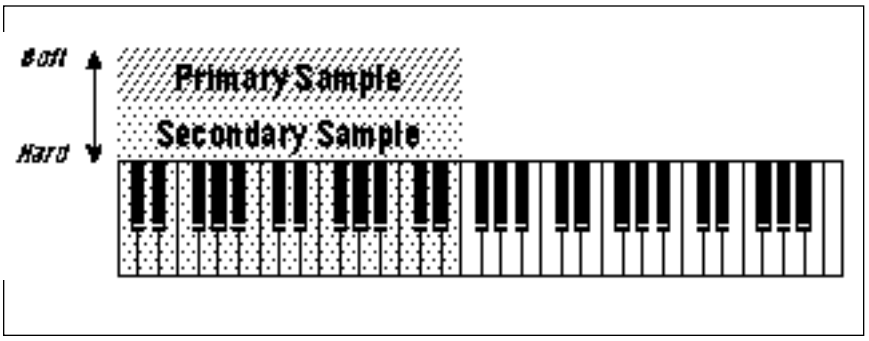
The second line shows the note being played on the keyboard (or scrolled with the Data Entry Control). After selecting a note, the first line displays the zone's crossfade status, the third line displays the primary sample number, and the fourth line displays the secondary sample number associated with the note on line two.

5. Select the desired type of crossfade from the following choices, then press ENTER.



- Crossfade Off: There is no crossfading between the primary and secondary samples.
- Velocity Crossfade: One sample will become louder as you play more forcefully; the other sample will become softer.
- Velocity Switch: If you strike a key with more force than the mid-point of the velocity range, one sample will play. If you strike a key with less force than the mid-point of the velocity range, the other sample will play.
- Positional Crossfade: As you play from low to high over the selected zone, one sample will fade out as the other sample fades in. This is a useful technique for maintaining an even tone quality over the keyboard when multi-sampling.
- Realtime Crossfade: Crossfading occurs not according to keyboard velocity, but according to the realtime controller that has been assigned in Preset Definition, Realtime Controls (0).

- Realtime Switch: Switching occurs not according to keyboard velocity, but according to the realtime footswitch values set in Preset Definition, Realtime Controls (0).
- Velocity Ranges: Allows you to control the velocity settings for crossfading or crosswitching between the primary and secondary layers or between linked presets.



Velocity Crossfade. If the secondary sample equals “Hard”, the primary sample becomes progressively softer and the secondary sample becomes louder with increasing playing force.

6. Select whether the primary or secondary sample will play when the keyboard is played forcefully, then press ENTER. If you choose Positional Crossfade, skip this step and go to Step 7.

```
  CROSSFADE/SWITCH
P00 pri C#1 to C2
Velocity Crossfade
  pri or sec Hard
```

Use the Data Entry Control to select whether the primary or secondary sample will:

- Fade in when the keyboard is played forcefully (Velocity Crossfade)
- Switch in when the keyboard is played forcefully (Velocity Switch)
- Fade in according to the realtime control wheel (Realtime Crossfade)
- Switch in according to the realtime footswitch (Realtime Switch)

After pressing ENTER the ESI will return to the Module Identifier.

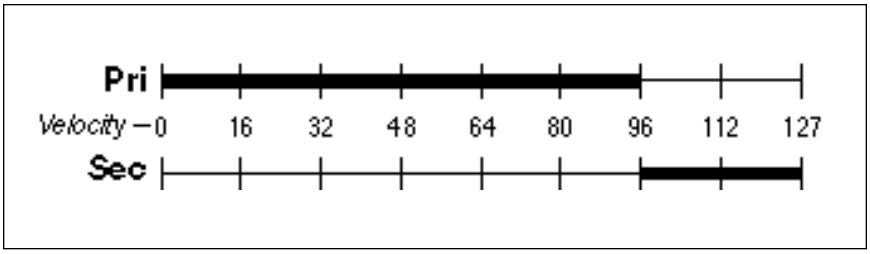
7. For Positional Crossfade, select whether the primary or secondary sample will increase in level as you play higher on the keyboard, then press ENTER. The other sample will decrease in level.

```
  CROSSFADE/SWITCH
P00        C1 to C2
Positional Crossfade
pri or sec = at Top
```

8. For Velocity Ranges, select Velocity Range as the Crossfade-Switch parameter and press ENTER. Next, select the velocity ranges in the Preset Definition module, Vel Switch Pt/Link (6).

• Crosswitch between the Primary and Secondary Layers

In this example, the Primary layer plays when the key velocity is below 96 and the Secondary layer plays when the key velocity is 96 or greater.



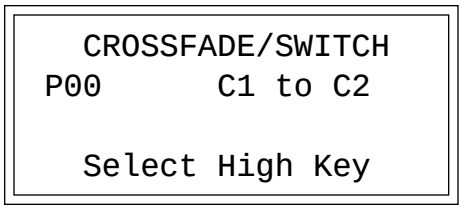
1. Press the Preset Definition key.
2. Select Crossfade Switch (5).
3. Select the lowest key of the zone to be crossfaded or switched, then press ENTER. The default is to the lowest note of the lowest sample. You can select a different low key in two ways. The Data Entry Control scrolls through the lowest key of each sample on the keyboard. The Data Entry Control is the fastest selection method if you want the lowest key of the zone to coincide with the lowest note of a sample. Or, you can use the keyboard to specify any note as the lowest note of the zone.

```
   CROSSFADE/SWITCH
P00       C1

    Select Low Key
```

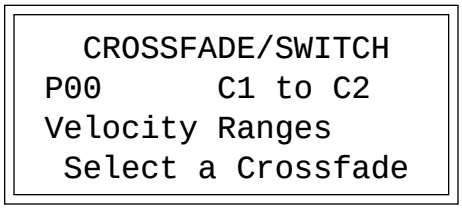
The second line shows the note being played on the keyboard (or scrolled with the Data Entry Control). After selecting a note, the first line displays the zone's crossfade status, the third line displays the primary sample number, and the fourth line displays the secondary sample number associated with the note on line two.

4. Select the highest key of the zone to be crossfaded or switched, then press ENTER. The ESI defaults to the highest note of the sample that contains the previously specified low note. You can select a different high key in two ways. The Data Entry Control scrolls through the highest key of each sample on the keyboard. The Data Entry Control is the fastest selection method if you want the highest key of the zone to coincide with the highest note of a sample. Or, you can use the keyboard to specify any note as the highest note of the zone.

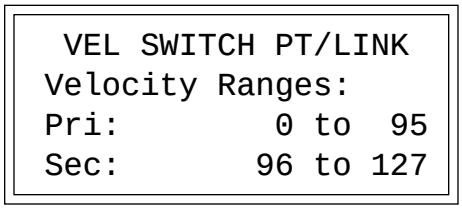


The second line shows the note being played on the keyboard (or scrolled with the Data Entry Control). After selecting a note, the first line displays the zone's crossfade status, the third line displays the primary sample number, and the fourth line displays the secondary sample number associated with the note on line two.

5. Select Velocity Ranges crossfade from the seven choices, then press ENTER.



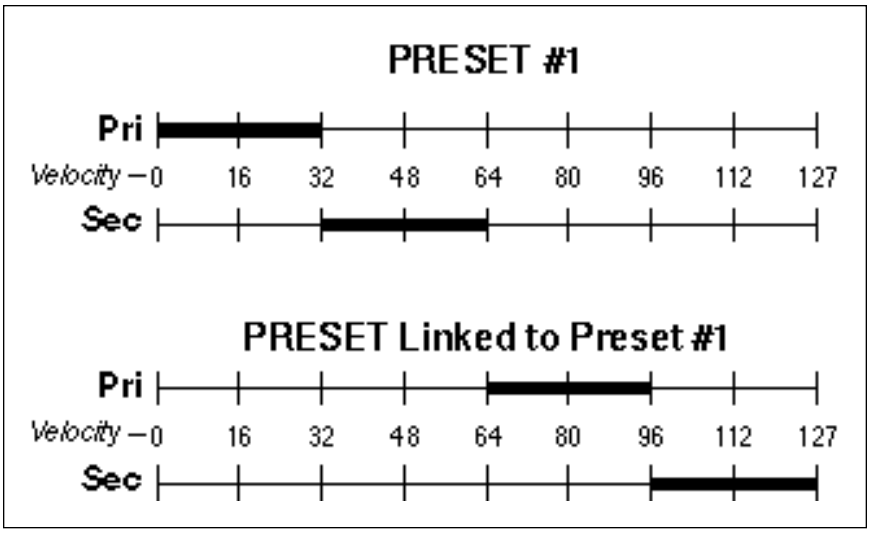
6. Select the Velocity Switch/ Preset Link Submodule (6).
7. Press the Right Cursor key. The following screen appears.



8. Set the Primary and Secondary Velocity Ranges and press ENTER. After pressing ENTER, the ESI returns to the Module Identifier.

• Crosswitch between Four Layers in Two Presets

The following example shows how to make a four way velocity crosswitch using a linked preset. The Primary layer of Preset #1 plays when velocity is in the range of 1-32. The Secondary layer of Preset #1 plays when velocity is in the range of 33-64. The Primary layer of the Linked Preset plays when velocity is in the range of 65-96. The Secondary layer of the Linked Preset plays when velocity is from 97 to 127.



1. Press the Preset Definition key.
2. Select Submodule Crossfade/Switch (5).
3. Define the zone as described in the previous example.
4. Select Velocity Ranges crossfade from the seven choices, then press ENTER.

```
  CROSSFADE/SWITCH
P00      C1 to C2
Velocity Ranges
 Select a Crossfade
```

5. Select submodule Vel Switch Pt/Link (6). The following screen appears. Move the Cursor down to the lower line using the down cursor key.

```
 VEL SWITCH PT/LINK
Vel Switch Point: 60
Link Preset to
001 Percussion 2
```

6. Select the Preset to be Linked. Linking Presets allows multiple presets to play at once.
7. Press the Right Cursor key. The following screen appears.

```
 VEL SWITCH PT/LINK
Velocity Ranges:
Pri:        0 to  32
Sec:       33 to  64
```

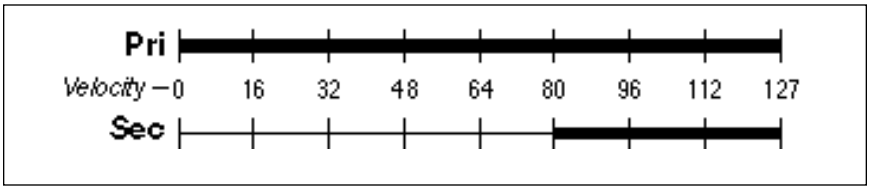
8. Set the Primary and Secondary Velocity Ranges and press ENTER. After pressing ENTER, the ESI returns to the Module Identifier.
9. Press Preset Definition to deactivate the module and return to the Preset Selection screen.
10. Select the Linked Preset.
11. Press the Preset Definition key.
12. Select submodule Vel Switch Pt/Link (6).
13. Press the Right Cursor key. The following screen appears.

```
 VEL SWITCH PT/LINK
Velocity Ranges:
Pri:      65 to  96
Sec:      97 to 127
```

14. Set the Velocity Ranges as shown above so that all four layers now have their own velocity range and press ENTER. After pressing ENTER, the ESI returns to the Module Identifier.
15. Return to the first preset.
16. Play the Keyboard soft at first, then harder and harder. You should hear the four different layers play as you vary the velocity.

Other Ideas

- By overlapping the velocity ranges you can create other special effects like having the Secondary layer come in only when a specific velocity is reached.



- With an effect assigned to a single layer you can use velocity to switch in effects such as echoes, chorus or reverb.
- Because you can link as many presets as you want, you could assign each layer to a very small velocity range so that different presets will be selected in a seemingly random way.

6. Velocity Switch/ Preset Link

This submodule contains two completely unrelated functions.

• The velocity cross-switch function in the Preset Definition, Crossfade/ Switch submodule (5) allows overlapping samples to be switched according to key velocity. The Velocity Switch portion of this module sets the velocity at which samples are cross-switched.

• The current preset can be linked with another preset, allowing you to place multiple presets on each key of the keyboard. As an example, suppose you link preset 001 to preset 002 and that preset 002 has previously been linked to preset 008. When preset 001 is played, presets 002 and 008 will play as well. When preset 002 is played, preset 008 will also play. The polyphony of the ESI will vary according to the voice architecture of each preset in the stack. If two presets are linked to themselves, forming a loop, those two presets will play in unison up to the channel limit of the ESI.

1. Activate Preset Definition module.
2. Select Vel Switch Pt/Link (6).
3. Use the Data Entry Control to select the velocity at which samples will be cross-switched. Values range from 1 to 127.

```
 VEL SWITCH/PT LINK
Vel Switch Point: 64
Link Preset to:
Pxx Off
```

4. Move the cursor down one line and use the Data Entry Control to choose the preset (or none) that will be linked to the current preset.
5. Press the Right Cursor key. The following screen appears.

```
 VEL SWITCH PT/LINK
Velocity Ranges:
Pri:      65 to  96
Sec:      97 to 127
```

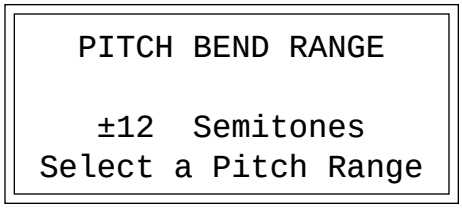
6. Set the Velocity Ranges and press ENTER.

After pressing ENTER, the ESI returns to the Module Identifier.

7. Pitch Bend Range

This submodule adjusts the pitch wheel range from ± 0 to ± 12 semitones.

1. Activate Preset Definition module.
2. Select Pitch Bend Range (7).
3. Select the desired pitch bend range.



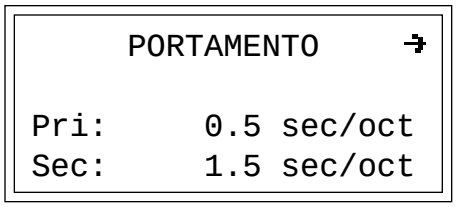
4. Press ENTER to exit the submodule. The ESI returns to the Module Identifier.

8. Portamento & Attack

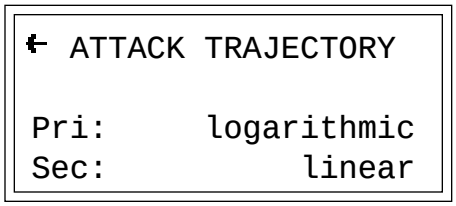
This submodule contains two completely unrelated functions:

- Portamento is a smooth gliding of pitch from note to note rather than the normal instantaneous change in pitch. Portamento affects all zones in the preset, but can be adjusted separately for the primary and secondary layers. Values are entered in number of seconds per octave from the last key to the current key. Portamento glides at a linear rate with a range programmable from 0.0 seconds (Off) to 32 seconds/octave.
- Attack Trajectory defines the attack curve of the ESI envelope generators. There are two selectable slopes: Linear or Logarithmic which affect all zones in the layer. A logarithmic attack rises quickly, then levels off as it approaches maximum level. Logarithmic mode works well for sounds with percussive attacks, while Linear mode tends to work better on sounds with slow attacks.

1. Activate Preset Definition module.
2. Select Submodule Portamento/Attack (9).
3. Select the desired portamento rate for the primary and secondary layers.



4. Select page two by pressing the right cursor button.



5. Press ENTER to exit the submodule. The ESI will return to the Module Identifier.

9. Effects

Effects Programmed in the Preset

This function is available only when the Turbo Option Kit is installed in the ESI. For detailed instructions on how to use the Effects submodule, refer to the Appendix.

When playing single presets (Omni or Poly mode) the effects are normally programmed as part of the preset. Because there are only two effects processors for the entire machine, each preset cannot be have its own effect in Multimode where up to 16 presets can be played at once.