8 Preset Definition

0. Realtime Controls

Realtime controls allow complex and expressive controls over the sound in real-time, hence their name. Realtime controls can be continuously varied over time and are designed for fast, easy selection while playing live. Each preset can have its own unique set of pre-programmed realtime functions.

The realtime control sources must be connected to a destination in order to have any effect. The second line of the display shows the realtime control source and the third line shows the destination (or what will be controlled by the source). Refer to the following diagram.
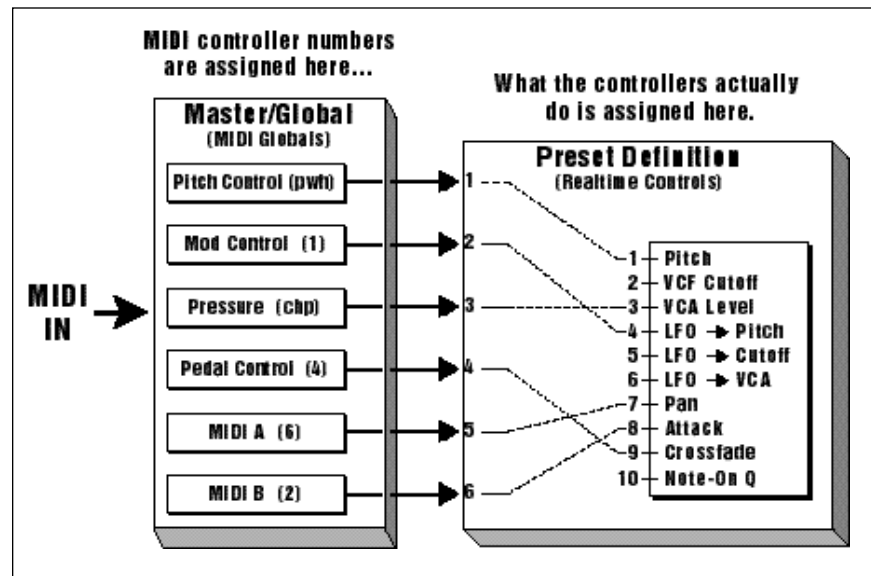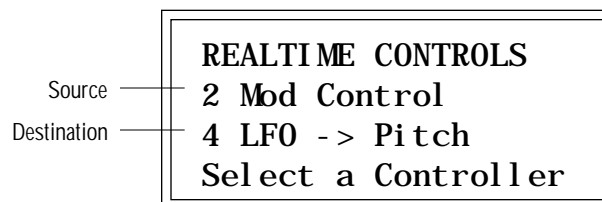
MIDI continuous controller number numbers are matched to your keyboard in the MIDI submodule. The Realtime Controls submodule programs what these controllers actually do.
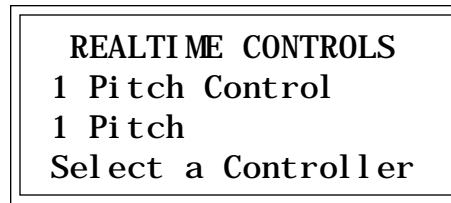
For example, in order to have the pitch wheel of your keyboard control the pitch of the ESI, it must be assigned to pitch. Set the Pitch Control to be the source and the pitch as the destination. To make the right wheel control the amount of vibrato (LFO to pitch), set Mod Control as the source and LFO-> Pitch as the destination.

! Remember: The realtime control assignments are only one-half of the connection. The MIDI continuous controller numbers are assigned in the Master/Global, MIDI submodule.

```
REALTIME CONTROLS
2 Mod Control
4 LFO -> Pitch
Select a Controller
```
Source ——— (line 2)
Destination ——— (line 3)

Despite their names: Pitch Control, Mod Control, Pressure Control and Pedal Control, any of the realtime controls can be assigned to any MIDI continuous controller number. The continuous controller number is assigned in the Master/Global, MIDI (9) submodule.

1. Activate Preset Definition module.

2. Select Realtime Controls (0).

3. Select a controller.

```
┌─────────────────────────────┐
│  REALTIME CONTROLS          │
│  1 Pitch Control            │
│  1 Pitch                    │
│  Select a Controller        │
└─────────────────────────────┘
```

The eight assignable controllers are:

1. Pitch Control
2. Mod Control
3. Pressure Control
4. Pedal Control
5. MIDI A Control
6. MIDI B Control
7. Footswitch 1 Control
8. Footswitch 2 Control

4. Move the cursor to line three and select the destination for the previous selected controller. For some presets on factory disks, default destinations will already have been selected. For other presets, all control sources may be turned Off. Each destination can be controlled by only one controller.

The diagram above shows the Realtime Control setting to control Cutoff Frequency with a Foot Pedal.
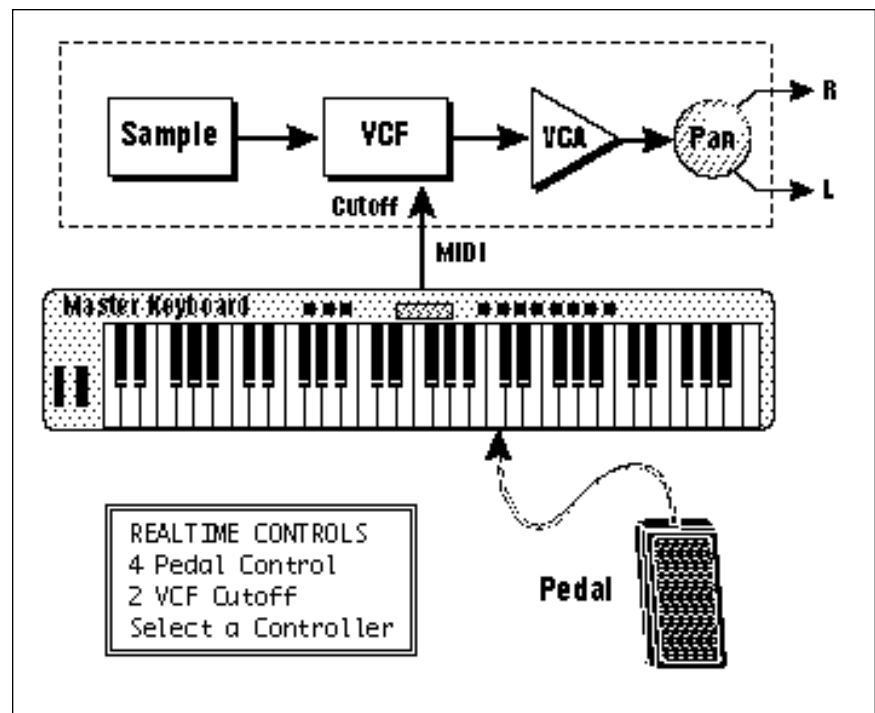
! Caution: Only one controller can be assigned to a destination. For example, if you assigned Mod. Control to VCF cutoff and then assigned Pressure Control to VCF cutoff, the ESI would automatically turn off the mod. control to VCF cutoff routing.

✶ Tip: Brass sounds often increase in brightness towards the end of the note. Simulate this effect by using the pedal or wheel to increase the filter cutoff frequency towards the end of the note.

Select the control destination from the following options:

0. Off: When chosen as a destination, this disables the control source.

1. Pitch: Generally, this destination is assigned to the left-hand synthesizer wheel, which has a center detent. When so assigned, the center position gives no pitch bend. Rotating the wheel away from you bends pitch up, while rotating the wheel towards you bends pitch down. Maximum pitch bend is ±12 semitones, as set in Preset Definition, Pitch Bend Range (7).

2. VCF Cutoff: This destination is normally assigned to the Mod Control, Pressure Control, or Pedal Control to add expressiveness to your playing. VCF Cutoff interacts with the filter module frequency and envelope settings. If the wheel does not seem to be working correctly, check these settings. For example, if the filter cutoff is already at maximum, you will not be able to use the wheel to increase the cutoff frequency.

3. VCA Level: Probably the most common use is to assign VCA level to the pedal, thus giving pedal-controlled volume. Or, assign this destination to the mod control when you need a manual volume control (such as during fadeouts). Assign VCA level to a MIDI controller for pseudo-automated mixdown effects when driving the ESI from a sequencer. The realtime control source adds to the initial amount as programmed in Dynamic Processing, VCA (2). For this destination to have any effect, the initial level of the zone must be set to a value less than 100%.

4. LFO -> Pitch: This destination controls the extent to which the LFO modulates pitch, and is most often assigned to the mod control. Rotating the wheel away from you increases the amount of vibrato. Assigning this destination overrides the equivalent Dynamic Processing module function.

5. LFO -> Cutoff: This destination controls the extent to which the LFO modulates the filter cutoff frequency. Assigning this destination overrides the equivalent Dynamic Processing module function.

6. LFO -> VCA: This destination controls the extent to which the LFO modulates the overall level. This effect is called tremolo. Assigning this destination overrides the equivalent Dynamic Processing module function.

7. Pan: This destination controls the spatial placement of the sound in the stereo field. When assigned to the pitch control, rotating the wheel away from you places the sound in one channel, rotating the wheel towards you places the sound in the other channel, and center wheel position places the sound in the center of the stereo field. You can also use the pedal for foot-controlled panning. Assigning this destination overrides the equivalent Dynamic Processing module function. The VCA pan position set in the Dynamic Processing module determines how the realtime controls will affect pan. Use the following chart to determine what effect a continuous controller will have on the pan position.

Controller	Effect on Pan Position
Pitch Control	Moves position Left or Right
Mod Control	Moves position Right
Pedal Control	Moves position Right
MIDI A Control	Moves position Right
MIDI B Control	Moves position Right
(+) Velocity	Moves position Right
(-) Velocity	Moves position Left

As an example, suppose you want the pedal to have full control of pan position. The Pedal Control can only move the sound to the right of its initial position. Therefore, you must set the initial pan position (Dynamic Processing, VCA (2)) to the extreme left. With the pedal fully up, the sound will appear at the extreme left. With the pedal centered, the sound will appear centered, and fully depressed, the sound will appear at the extreme right.

8. Attack: This destination controls the VCA and VCF envelope attack rate. When assigned to the mod control, rotating the wheel away from you increases the attack time. This effect is useful when changing from legato to percussive effects, especially with sustained sounds such as strings.

9. Crossfade: This destination fades the primary sample(s) out while fading the secondary sample(s) in, or vice-versa. When assigned to the pitch control, this function also provides for realtime mix changes between two separate sounds (e.g., strings can fade out while brass fades in). This function must also be enabled under Preset Definition, Crossfade/Switch (5).

10. VCF Note On Q: This destination allows you to control Q with a continuous controller. Since this is a "Note-On" destination, the position of the controller is accessed only at the time the note is first turned on (key pressed).

The following is a description of the footswitch destinations:

0. Off: The footswitch is not on.

1. Sustain: If you play a looped sound while the footswitch is pressed, as soon as the looped portion begins, it will sustain (even after lifting your fingers off the keys) until the footswitch is released. Holding down the footswitch continuously provides a hold function for looped notes, where the last eight notes played will sustain for as long as the footswitch is pressed. If you play an unlooped sound while the footswitch is pressed, it will play through its entire length (whether or not you are holding down a key), then stop.

2. Cross-Switch: This provides footswitch-controlled switching between the primary and secondary samples. Pressing the foot-switch will alternate between the two samples. This function must also be enabled under Preset Definition, 5. Crossfade/Switch.

3. Unused 1

4. Unused 2

5. Unused 3   (Footswitch destinations 3-7 are EIII functions which were not implemented in the ESI. The numbers were retained to maintain compatibility.)

6. Unused A

7. Unused B

8. Preset Increment: Press the footswitch to advance from one preset to the next higher numbered preset (i.e., from preset 01 to preset 02). The ESI will stop incrementing at the highest numbered preset.

9. Preset Decrement: Press the footswitch to fall back from one preset to the next lower numbered preset (i.e., from preset 02 to preset 01). The ESI will stop decrementing at the lowest numbered preset.

5. Move the cursor to line two and repeat steps 3 and 4 to map additional controllers.

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

★ Tip: Preset Increment/Decrement needs to be set for each preset if you want to step through all your presets.

1. Load Zone

This submodule allows a zone, including samples and dynamic processing parameters, to be loaded from the internal hard disk drive or external storage devices into any preset.

1. Activate Preset Definition module.

2. Select Submodule Load Zone (1).

3. If you wish to select a different drive, move the cursor to the drive number. If not, proceed to step 5.

4. Select the drive containing the zone to be loaded, then press ENTER.

```
        LOAD ZONE from
    D1 Main HD


        Select a Drive
```

5. Select the bank that contains the preset from which the zone will be loaded, then press ENTER.

☑ Note: Zone selection works slightly differently depending on the module you are using. In the Preset Definition module, Dynamic Processing parameters and Samples are selected when you select a zone. In the Dynamic Processing module, selecting a Zone only affects the Dynamic Processing parameters.

```
        LOAD ZONE from
    01 Main HD
    B00 Current Bank
        Select a Bank
```

6. Select the preset that contains the zone to be loaded, then press ENTER.

```
        LOAD ZONE from
    P00 Current Preset

    Select Source Preset
```
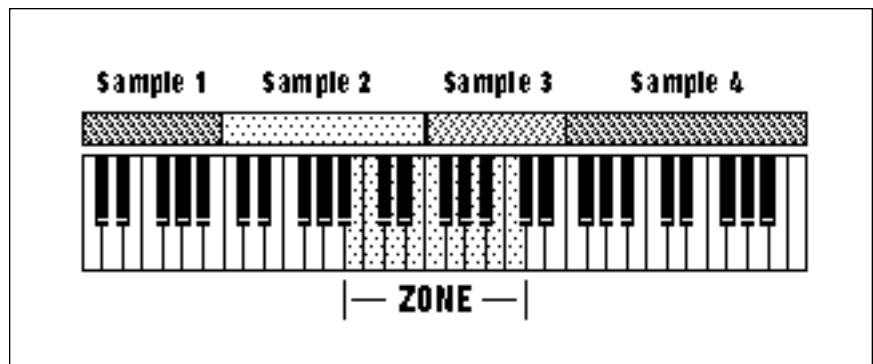

The zone contains samples as well as dynamic processing parameters.

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

```
┌─────────────────────────────┐
│  LOAD ZONE from             │
│ P00 both                    │
│                             │
│  Select pri/sec/both        │
└─────────────────────────────┘
```

8. Select the lowest key of the zone to be loaded, 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.

```
┌─────────────────────────────┐
│  LOAD ZONE from             │
│ P00 both 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 third line displays the primary sample number, and the fourth line displays the secondary sample number associated with the note on line two.

9. Select the highest key of the zone to be loaded, 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.

```
┌─────────────────────────────┐
│  LOAD ZONE from             │
│ P00 both C1 to C2           │
│                             │
│   Select High Key           │
└─────────────────────────────┘
```

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.

10. Select the preset into which the zone will be loaded, then press ENTER. The ESI defaults to the lowest numbered empty preset.

```
LOAD ZONE into
P01 Empty Preset

Select Dest Preset
```

If you select an empty preset, 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.

11. 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 load primary sample(s) into secondary locations and visa versa. If in step 6 you selected both samples, the ESI will skip this step, as these samples will always be loaded into both primary and secondary sample slots of the destination preset.

! Caution: Loading a zone will overwrite any previously assigned notes that overlap with the zone being loaded.

```
LOAD ZONE into
P01 pri

   Select pri/sec
```

12. Select the 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 returns to the Module Identifier.

```
LOAD ZONE into
P01 both C1

Select New Low Key
```


ZONE = (Keyboard Range)

Any Range   Entire Kybd

2. Edit Assignment

Use this function to change the zone assignment and original keys within a preset. Edit Assignment also tells you which samples are assigned to which keys.

1. Activate Preset Definition module.

2. Select the Edit Assignment Submodule (2).

3. If there are both primary and secondary samples, select which one you want to edit, then press ENTER. If there are only primary or secondary samples, the ESI will automatically go to step four.

```
     EDIT ASSIGNMENT
P00 pri


Select pri/sec/both
```

✦ Tip: To find out which samples are assigned to the keyboard, simply select Edit Assignment and play the keyboard. When you are finished, press Escape.

4. Select the lowest note of the zone to be re-assigned, 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 zone's lowest note.

! Caution: Selecting zones in the Edit Assignment menu can be confusing. We recommend that the zone boundaries coincide with the boundaries of a single sample when editing assignments. (Use the Data Entry Control.)

```
     EDIT ASSIGNMENT
P00 both C1


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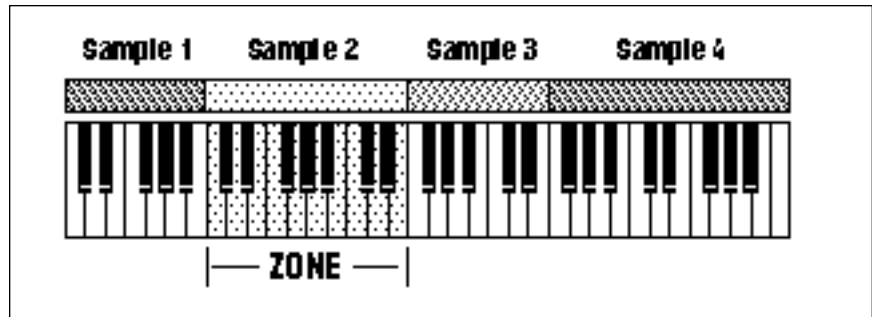
The second line shows the note being played on the keyboard (or scrolled with the Data Entry Control). After selecting a note, the third line will display the primary sample number, and the fourth line will display the secondary sample number associated with the note on line two.

5. Use the Data Entry Control to select the highest note of the zone to be re-assigned, then press ENTER. The default is 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.

! Caution: Normally you will select the default high key (just press ENTER) unless you want to edit only part of a zone.

```
     EDIT ASSIGNMENT
P00 both C1 to C2


  Select High Key
```

If you just want to select the existing zone, simply press ENTER when the display asks you for the high key. The entire zone will be selected.

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. Edit the assignment, then press ENTER. The display shows the zone range (typically the low and high notes of a particular sample) and the original key. Use the cursor buttons to select parameter(s) to edit, and select keys by using the keyboard or Data Entry Control. In this screen you set the new zone assignment. If you extend the new zone so that it overlaps another sample on the same layer, it will replace the other sample in that area of the keyboard. After pressing ENTER the ESI will edit the zone range and the original key, and then return to the Module Identifier.

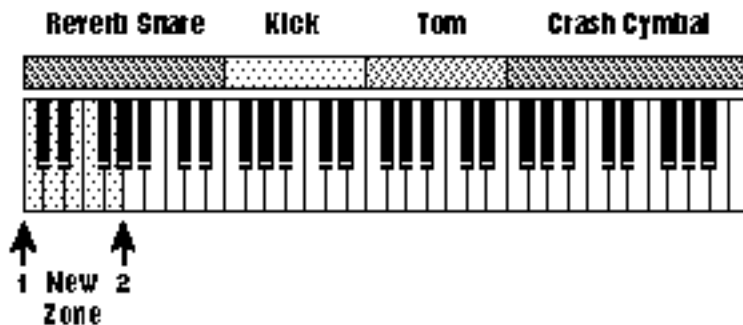APPLICATION: Adjust the range of a sample.

1. Activate Preset Definition module.

2. Select Edit Assignment (2).

3. Select the proper layer, then press ENTER. If there are only primary or secondary samples, the ESI automatically goes to step four.

4. Select the lowest note of the desired zone using the Data Entry Control, then press ENTER. The Data Entry Control scrolls through the lowest note of each sample on the keyboard.

5. When the display asks for the highest note of the zone, simply press ENTER.

6. Edit the zone's range. Do not change the original key. (It need not be within the range of the zone.) If you are extending the range of a sample, the other samples will move to make room for the new zone.

APPLICATION: Transpose a Zone

1. Activate Preset Definition module.

2. Select Edit ssignment (2).

3. If there are both primary and secondary samples, select Both, then press ENTER. If there are only primary or secondary samples, the ESI will automatically go to step four.

4. Select the lowest note of the desired zone using the Data Entry Control, then press ENTER. The Data Entry Control scrolls through the lowest note of each sample on the keyboard.

5. Use the Data Entry Control to select the highest note of the zone, then press ENTER. The Data Entry Control scrolls through the highest note of each sample on the keyboard.

6. Edit the original key to transpose the zone. The original key need not be within the range of the zone. As an example, moving the original key down from G1 to G-0 would result in the zone being transposed up one octave. Moving the original key up from G1 to G2 would transpose the zone down one octave.

APPLICATION: Transpose Part of a Zone.

Suppose you wanted to transpose the area marked by the arrows down an octave to create a Snare of Doom sound. Here's how.

1. Activate Preset Definition module.

2. Select Edit Assignment (2).

3. If there are both primary and secondary samples, select Both, then press ENTER. If there are only primary or secondary samples, the ESI will automatically go to step four.

4. Select the note marked by arrow 1 using the keyboard, then press ENTER.

5. Select the note marked by arrow 2 using the keyboard, then press ENTER.

6. Edit the original key to transpose the zone. Move the cursor down to the third line of the display, then use the INC/DEC buttons to select a new original key. Moving the original key up transposes down and vice-versa. Press ENTER. Only the new zone will be transposed. Everything else remains as before.

3. Erase Zone

Use this function to erase a zone.

1. Activate Preset Definition module.

2. Select Erase Zone (3).

3. If there are both primary and secondary samples, select the one you want to edit, then press ENTER. If there are only primary or only secondary samples, the ESI automatically proceeds to step 4.

```
        ERASE ZONE
P00 pri


   Select pri/sec/both
```

4. Select the lowest note of the zone to be erased, 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.

```
        ERASE ZONE
P00 both 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 third line displays the primary sample number, and the fourth line displays the secondary sample number associated with the note on line two.

5. Use the Data Entry Control to select the highest note of the zone to be erased, then press ENTER. The default is 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.

```
        ERASE ZONE
P00 both C1 to C2


      Select High Key
```