Roland

SP-808

groovesampler

Roland SP-808 Basics

The new Roland SP-808 Groove Sampler offers a whole new approach to sampling and remixing. This unique workstation combines phrase sampling, hard disk recording, effect processing and live performance features that are essential for today's producers and remixers. This document will cover some of the basic operations of the SP-808 such as sampling and track editing. In addition, we will offer some tips and suggestions for using the SP-808 in ways you might not have thought of. This document is not intended to be a replacement of the owner's manual, but it can provide you the basic knowledge needed to start using your SP-808. For more in-depth information, please consult the SP-808 Owner's Manual.

Topics

We will cover the following topics in this document:

I. The SP-808 Architecture

Before we get into some of the features, it is a good idea to understand how the SP-808 is laid out. The SP-808 is a new type of instrument that combines sampling, hard disk recording, effects, and realtime performance features into a single workstation. A quick look at the front panel will give you a good idea how these various components are designed to work together (see Fig. 1). The hard disk recording section is located at the lower left portion of the front panel and uses the familiar fader and status button controls found on many recorders. The sampling section is found on the lower right and is a pad based interface that is popular on many "phrase" type samplers. The upper right section of the SP-808 contains the effect and realtime performance features, including the innovative D-Beam* infrared light controller. Separating these sections are the edit and transport controls that are located in the center of the SP-808.

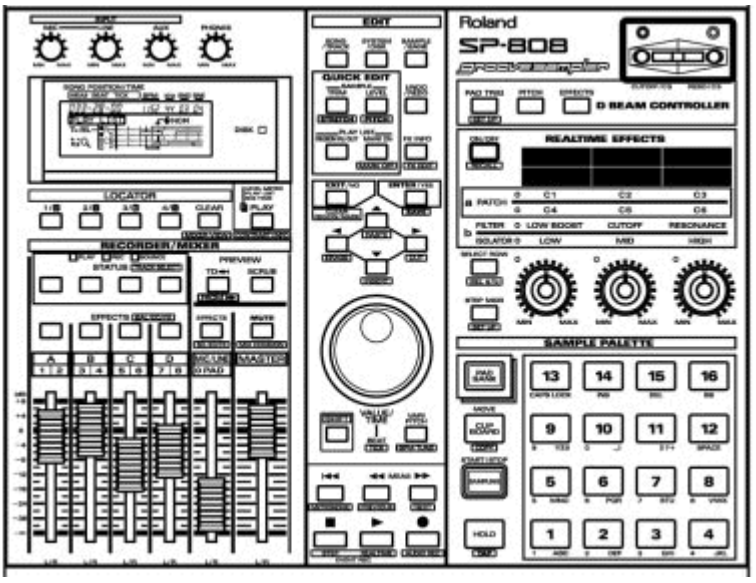

Fig. 1
The SP-808 Front Panel

When you record to the SP-808, you will record in one of two ways: as a sample, or as a track. A sample is typically a shorter piece of audio designed to be triggered from the 16 pads in the sampling section of the SP-808. A single Zip™ disk can contain as many as 1024 samples, which are divided into 64 banks of 16. A track is typically a longer, more linear type recording such as a lead vocal or guitar track, and is controlled by the faders and status buttons in the recorder/mixer section of the SP-808. Tracks can also be used to trigger samples by recording the order in which you press the pads. There are four stereo tracks on the SP-808 that provide up to 46 minutes of CD quality recording on a each Zip™ disk.

II. Sampling

In the past, many people were intimidated by the sampling process. Traditionally, sampling meant you had to navigate through endless menus and parameters just to record something. Then, you would spend hours trimming and looping your samples by trial-and-error. This process seemed to have more relation to mathematics than music. The SP-808 allows you to do all of these things quickly and easily without wasting lots of your time. Let's get started:

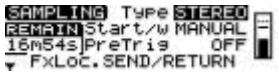

Fig. 2
The Sampling Screen

1. Insert a SP-808 formatted Zip™ disk into the drive.
2. Press SAMPLING so the "Sampling" screen is displayed (see Fig. 2).
3. Press the pad you wish to sample to.

Note: When you press the sampling button, the SP-808 will automatically select the next available pad.

4. CURSOR to Start/w and rotate the VALUE/TIME dial to select "Lev. 1."
5. Play your instrument or CD and adjust the LINE or MIC INPUT knobs so that the signal is just below the dotted line on the meter. After you have set the desired level, stop playing.
6. Press SAMPLING and then start playing your instrument or CD.
7. Press SAMPLING again when finished. "Finished. Check Result. OK?" will be displayed.
8. Press any pad to hear the playback of your sample. Press ENTER/YES to keep it or EXIT/NO to try again.

If you have a Sampling CD (CD with pre-programmed loops and sounds), you can record large portions of the CD at one time and use a special SP-808 feature called "Auto Divide" to automatically separate the samples to the different pads. This feature will save you tons of time because you don't have to stop and setup for each sample. Here's how you do it:

1. Follow steps 1 - 5 in the Sampling section above.
2. CURSOR down to Auto Trim and rotate the TIME/VALUE dial to select "ON."
3. CURSOR down to Auto Divide and rotate the TIME/VALUE dial to select the amount of silence needed before division takes place. You can select from 0.5, 1.0, 1.5, or 2.0 seconds.
4. Press SAMPLING and then start playing your CD.
5. Press SAMPLING again when finished. The SP-808 will start dividing the samples to each available pad. If it fills up an entire pad bank, "PADs are Full. Use Next Bank?" will be displayed. Press ENTER/YES to continue.

III. Sample Editing

After sampling to the pads, editing is a breeze. First of all, the SP-808 has a section on the front panel called QUICK EDIT. The main sample editing features (Trim, Level, Stretch, and Pitch) allow you to quickly cut, adjust the volume, change the tempo, or change the pitch of your sample. Let's start editing our sample:

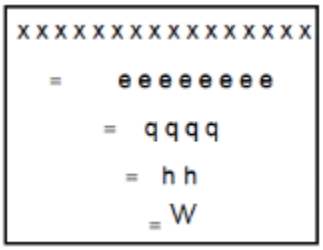

Fig. 3
Musical Note Values

Trim

Trimming a sample is the process of changing the start, loop and end point (see Fig. 4 on page 7) of the sample so that it loops smoothly and/or plays only the portion of the sample that you want to play back. A perfect loop should sound seamless when it repeats. The SP-808 lets you trim samples in a more musical fashion than most samplers, using parameters such as BPM and measure number. Because of this, we are going to start with a quick overview of some common musical terms. Here's a brief description of some musical terms that will be helpful to know:

Beat	= Each time you tap your foot in time with the music is equal to one beat. In most popular music, this is referred to as a quarter note (q).
Measure	= A grouping of beats. In most dance music, there are usually four beats to a measure and the first beat (the downbeat) is usually emphasized.
Quarter Note	= A division of time in music. Represented by the "q" symbol in musical notation. In most popular music, a quarter note is equal to one beat and there are usually four quarter notes in a measure.
Half Note	= A division of time in music equal to two quarter notes. Represented by the "h" symbol in musical notation. In most popular music, there are two half notes in a measure.
Whole note	= A division of time in music equal to four quarter notes. Represented by the "w" symbol in musical notation. In most popular music, there is one whole note in a measure.
Eighth Note	= A division of time in music equal to 1/2 a quarter note. Represented by the "e" symbol in musical notation. In most popular music, there are eight eighth notes in a measure.
Sixteenth Note	= A division of time in music equal to 1/2 an eighth note. Represented by the "x" symbol in musical notation. In most popular music, there are 16 sixteenth notes in a measure.
Tempo	= In music, the tempo indicates how fast or slow the beats are counted. In other words, it is the speed of the music. Tempo is normally indicated in beats per minute (BPM).
Time Signature	= In music, the time signature determines two things: the note value that is equal to one beat and how many beats there will be in a measure.

Note: Most of today's music is written in a time signature of 4/4. This means that the quarter note will be equal to one beat and that there will be four beats in each measure. A typical "House Beat" is a good example of this. The kick drum usually plays on every beat which, in musical terms, is the equivalent of quarter notes. A new measure begins after every four beats. The speed at which the kick drum is played is determined by the tempo. A tempo marking of q = 120 BPM indicates that the kick drum would play 120 times in one minute and, in 4/4 time, would be 40 measures long.

Knowing the tempo and time signature of your sample will allow you to set the loop points quickly and easily. The SP-808 will estimate the tempo of your sample based on the note type and length parameters that are set on the Sample Parameter screen and the length of time between starting and stopping the sampling function. Many sample CD's have the BPM for each sample listed. The trick is to first determine the length of the sample in order to get the correct BPM. For example, if you are sampling a two bar drum loop in 4/4 time, you would set the BPM BaseNote to "q" (a quarter note) and the length to "x 8" (because there are eight quarter notes in two bars of 4/4 time). When you finish sampling, the tempo in the upper right portion of the display should match the tempo listed for that sample. If it does not match, you can adjust the Length (>End) parameter until the tempos match. Now, when you play back your sample, it should loop smoothly.

Tip: If you hold down SHIFT and rotate the VALUE/TIME dial, you can change the values in exact doubles or halves. Also, the Start and Loop points can be moved without changing the length of the loop by rotating the VALUE/TIME dial while holding the STOP button.

If you do not know the tempo, you can hold down SHIFT and tap the HOLD button in time with the sample until the tempo is displayed on the screen. This feature is called Tap Tempo and it can be very helpful. You may need to tap the button several times in order to get the correct tempo.

Note: If you cursor up, you can set the Loop Mode. "START-END" will repeat the entire sample. "LOOP-END" will allow you to set a loop point that is different from the start point. When you press a pad, the sample will play from the Start Point to the end point. When the sample repeats, it will play from the Loop Point to the End Point.

Use the following procedure to set the loop points of your sample:

1. Press TRIM followed by the pad you wish to edit.
2. CURSOR to X (Times) and rotate the VALUE/TIME dial to adjust the length of the loop (total number of beats). For example, if you have a one measure loop, you will select "4." If you have a two bar loop, select "8."
3. CURSOR to Length (->End) and rotate the VALUE/TIME dial to adjust the end of the sample until you get the desired BPM.
4. Play the pad to check your results. Playback will start just before the end of your sample so you won't have to wait to hear the loop point.

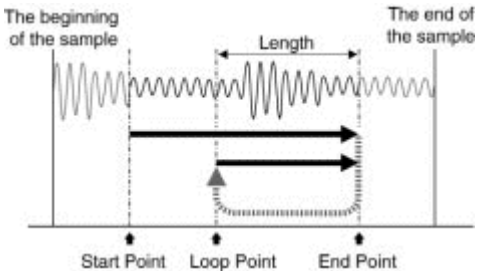

Fig. 4
Sample Loop Example

Time Stretch
Stretching a sample will allow you to change the tempo or BPM of the sample without changing the pitch. This is extremely useful when you wish to match the tempo of one sample to another or when you want to change the tempo of a sample to match the tempo of a tune you're working on. Use the following procedure:

1. Hold SHIFT and press STRETCH.
2. CURSOR to SOURCE and press the pad you wish to change.
3. CURSOR to TO and press the pad you wish to write the new sample to.
4. CURSOR to NewBPM and rotate the VALUE/TIME dial to select the desired BPM and press ENTER/YES.

You can also use RATIO to determine your new tempo. Here's an equation you can use to get the ratio:

(ORIGINAL TEMPO / NEW TEMPO) x 100 = RATIO

1. Divide the original tempo by the new tempo. For example, if the original tempo is 100 BPM and you want to change it to 110 BPM, your outcome would be .9090.
2. Multiply your outcome by 100. In our example, our result would be 90.9.
3. CURSOR down to Ratio and use the VALUE/TIME dial to enter your result and press ENTER/YES.
4. Press PLAY to return to the main play screen and press the pad to hear the results.

If you want to match the tempo of another pad:

1. Hold SHIFT and press STRETCH.
2. CURSOR to SOURCE and press the pad you wish to change.
3. CURSOR to TO and press the pad you wish to write the new sample to.
4. CURSOR up to Match/w and press the pad you wish to match.
5. CURSOR down to TYPE and rotate the VALUE/TIME dial to select "TEMPO."
6. Press ENTER/YES.
7. Press PLAY to return to the main play screen and press the pad to hear the results.

Pitch
Changing the pitch of a sample without changing the tempo can also be a very useful tool. Sometimes, you may already have the correct tempo, but the pitch just doesn't fit with the tune your working on. For example, you might have a horn hit that needs to be a half step higher than when it was originally sampled. Use the following procedure to change the pitch of a sample:

1. Hold SHIFT and press PITCH.
2. Press the pad or rotate the VALUE/TIME dial to select the SOURCE sample you want to change.
3. CURSOR to TO and press the pad you wish to write the new sample to.
4. CURSOR to GRADE and rotate the VALUE/TIME dial to select the desired grade (1-5) of the effect. Higher numbers result in better fidelity, but may affect the rhythm of the sample.
5. CURSOR to NewPitch and rotate the VALUE/TIME dial to select the desired pitch. For example, if you want to shift the sample a whole step up, select "2." If you want to shift it a whole step down, select "-2" (see Fig. 5).

6. Press ENTER/YES.
7. Press the PLAY button to return to the main play screen and press the pad to hear the results.

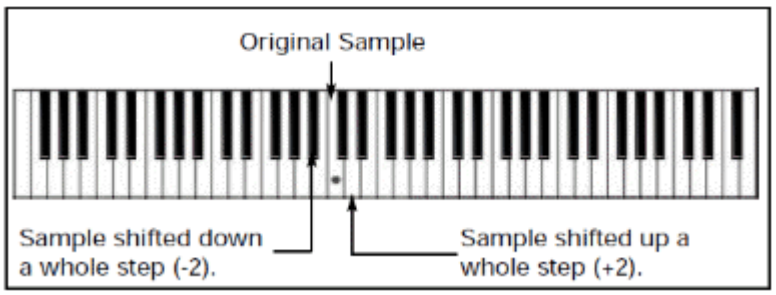

Fig. 5
Pitch Shift
Example

Level
The Level function allows you to adjust the volume of each sample. This will help you blend all your samples so that one is not louder than another. Use the following procedure to set the level of a sample:

1. Press LEVEL.
2. Press the pad you wish to change.
3. Rotate the VALUE/TIME dial to adjust the level as desired (0-100).
4. Press PLAY to return to the main play screen and press the pad to hear the results.

IV. Using Effects
Roland is well known for their great effects processors and the effects on the SP-808 are no exception. There are many unique effects such as the analog synth, the step modulator, analog modeled choruses, tape delays, and flangers. They've even included effects from popular Roland products such as the SDE-330 Digital Delay, SRV-330 Digital Reverb, and the VS8F-Series Effect Expansion boards used in our popular hard disk recorders. It's amazing how these effects can make even the most tired, overused samples seem brand new.

The SP-808 also allows you to use the dual D-Beam controller to alter the effects in real time, great for live performance and re-sampling (page 15).

Use the following procedure to apply effects to a sample:

1. Press REALTIME EFFECTS [ON/OFF] so it is lit.
2. Hold SHIFT and press SELECT ROW so that "a" (PATCH) is lit.
3. Hold SHIFT and press MUTE to display the Mix Common screen.
4. CURSOR to FxLoc and use the VALUE/TIME dial to select "(FX PATCH)."
5. Hold SHIFT and press EFFECTS.
6. CURSOR to the Fx value and use the VALUE/TIME dial to adjust the overall effect level as desired.
7. Press FX INFO and use the VALUE/TIME dial to select the desired effect.
8. Press ENTER/YES to select the effect.

9. Press the desired pad to hear the results.
10. Repeat steps 4-6 to audition different effects.

Sampling with Effects

The SP-808 allows you to record an effect and make it a permanent part of your sample. This frees up the effect processor, allowing it to be used on another sample or track. There are two different ways an effect can be routed to record: as an insert effect or in a send/return loop. The method you should use depends on the effect you are using. Insert should be used when you want to send your source signal into the effects processor and record the output of the effects processor without recording the dry signal. Some effects commonly used in an insert routing include distortion, slicer, and radio. Use the send/return method when you want to record a mixture of the dry and effected signal. Effects such as reverb, delay, and chorus are commonly used in a send/return fashion.

Use the following procedure to record a sample with the effects inserted:

1. Hold SHIFT and press MUTE (MIX COMMON).
2. Hold SHIFT and press SELECT ROW so that "a" (PATCH) is lit.
3. CURSOR to FxLoc and rotate the VALUE/TIME dial to select "INS RECORD."
4. Press REALTIME EFFECTS [ON/OFF] so it is lit.
5. Press FX INFO and use the VALUE/TIME dial to select the desired effect.
6. Press ENTER/YES to select the effect.
7. Press PLAY to return to the main screen. Now, when you sample to a pad, the effect will be recorded.

Use the following procedure to record an effect in a send/return loop:

1. Hold SHIFT and press MUTE (MIX COMMON) to display the Mix Common screen.
2. CURSOR to FxLoc and use the VALUE/TIME dial to select "SEND/RETURN."
3. Press PLAY to return to the main play screen.
4. Press MIC/LINE EFFECTS so it is lit.
5. Repeat steps 4-7 above to sample with an effect.

Realtime Effects Knobs and the D-Beam

Each effect contains six parameters that can be edited as the sample or track is playing by using the Realtime Effect knobs. These knobs will edit different parameters depending on the effect you choose. The SELECT ROW button will toggle between the parameters that can be controlled with the knobs. You can also assign the Realtime Effects knobs to function as a 3-band isolator or filter control. This is very useful for live performance.

Use the following procedure to assign the Realtime Effects knobs to function as a 3-band isolator or filter control:

1. Hold SHIFT and press SELECT ROW so that "b" (FILTER/ISOLATOR) is lit.
2. Press the SELECT ROW button by itself to toggle between FILTER and ISOLATOR.
3. Play the pad and rotate the control knobs to edit the effect.

The dual D-Beam can also be an effective tool for editing the effects. The D-Beam is an infrared beam that can be used to control various parameters on the SP-808, including effect parameters. The D-Beam is controlled by moving your hand across the beam and the parameters will change in various ways depending on how close your hand is to the source of the beam on the SP-808's front

panel. The SP-808 actually uses a dual D-Beam controller that can edit two different parameters at once. Most of the preset effect Patches already have controllers assigned to the left and right beam. Use the following procedure to edit an effect in real time using the D-Beam controller:

1. Hold SHIFT and press SELECT ROW so that "a" (PATCH) is lit.
2. Press SELECT ROW so that FILTER is lit.
3. Press REALTIME EFFECTS [ON/OFF] so it is lit.
4. Press D-BEAM CONTROLLER EFFECTS so it is lit.
5. Play the desired sample or track and move your hands over the D-Beam to control the effects as desired.

Use the following procedure to change the effect parameters the D-Beam controls:

1. Hold SHIFT and press SELECT ROW so that "a" (PATCH) is lit.
2. Hold SHIFT and press FX INFO.
3. Use the CURSOR buttons to highlight CTL (Control) and press ENTER/YES.
4. CURSOR down to C5BL(Control 5 Beam Left) and rotate the VALUE/TIME dial to select the desired effect parameter for the left D-Beam.
5. CURSOR down to C6BR(Control 6 Beam Right) and rotate the VALUE/TIME dial to select the desired effect parameter for the right D-Beam.
6. Use the PARAMETER buttons and the VALUE/TIME dial to change other effect values as desired.
7. Press PLAY to return to the main play screen.
8. Press one of the pads to play a sample and move your hand across the D-Beam to hear the results.

Virtual Analog Synth

In addition to all of the other effects, the SP-808 contains a virtual analog synthesizer similar to the Roland JP-8000. This is a programmable monophonic synthesizer that can be triggered from an external keyboard, the D-Beam controller, or the Step Modulator. It has all of the parameters you would expect from an analog synth including cutoff, resonance, VCO, VCF, LFO, portamento, ring modulator, delay, chorus, and flanger effects. You can customize these parameters and save the settings as a user effects Patch. You can also sample the output of the synthesizer to a pad or record it to a track. Use the following procedure to control the virtual analog synthesizer effect from a MIDI keyboard:

1. Connect the MIDI OUT of your keyboard to the MIDI IN of the SP-808.
2. Set your keyboard to transmit on MIDI channel 11 (refer to the owner's manual for your keyboard if you are unsure how to do this).
3. Press FX INFO, use the VALUE/TIME dial to select "P99 20>AnlgSyn," and press ENTER/YES.
4. Play the keyboard to hear the virtual analog synthesizer.

Tip: You can adjust the parameters of the virtual analog synthesizer in real time using the Realtime Effects knobs. Refer to pages 123-130 of the SP-808 Owner's Manual for more information.

If you have edited the effect parameters and would like to save those settings, use the following procedure to write a user effects Patch:

1. Hold SHIFT and press ENTER/YES (SAVE).
2. CURSOR down to EFFECTS Patch and press ENTER/YES.
3. Use the VALUE/TIME dial to select the desired User location.
4. CURSOR down to New Name and use the pads or the VALUE/TIME dial to rename the Patch.
5. Press ENTER/YES twice.
6. Press PLAY to return to the main play screen.

Fig. 6
The Step Mod Setup Screen

V. Using the Step Modulator

The Step Modulator is a virtual recreation of the analog sequencers found in the 1980s. When combined with the virtual analog synthesizer, you can create great techno-like patterns (up to 16 notes) without a MIDI keyboard. The tempo of the Step Modulator can be controlled manually or by the Tempo Map of the current song. There are many preset sequences already programmed into the SP-808 or you can create your own. Use the following procedure to set up and record your own patterns into the Step Modulator using the Analog Synth preset:

1. Press FX INFO, use the VALUE/TIME dial to select "P66 SY:StepTk3," and press ENTER/YES. This is a preset effects Patch for the Step Modulator that is 16 beats in duration.
2. Hold SHIFT and press STEP MOD (SET UP) to display the Step Mod setup screen (see Fig. 6).
3. Use the VALUE/TIME dial to select "REPEAT" for the trigger type. In this setting, the step modulator will play continually while STEPMOD is turned on.

   Other trigger type settings include:
   1 STEP: Plays only one note every time you press the STEP MOD button.
   SINGLE: Plays through the sequence once when you press the STEP MOD button.
   MEAS: Plays one measure of the sequence when you press the STEP MOD button.
   SngPLY: Plays the sequence every time you play the song.

4. CURSOR down to VALUE and use the VALUE/TIME dial to select the first note to be played by the Step Modulator.
5. CURSOR right once and use the VALUE/TIME dial to select the second note to be played. If you want the first note to play longer, rotate the VALUE/TIME dial counterclockwise to select "TIE." If you want a pause before the next note, select "RST" (REST).
6. Repeat steps 3 and 4 to program additional notes as desired. If you want the pattern to be shorter than 6 beats, CURSOR up to EndStep and use the VALUE/TIME dial to select the desired length.

   Tip: You can have two step progressions play at the same time by selecting an EndStep value of 8 or less. Steps 1-8 become the first progression and 9-16 become the second. This is referred to as "parallel motion."

7. CURSOR down to BPM and use the VALUE/TIME dial to select the desired tempo for your pattern. You can also select SONG to have it follow the Tempo Map of the current song.

Use the procedure for writing a user effects Patch (page 13) to save the sequence you created. The sequence will be saved with the effects Patch. The STEP MOD button will flash when the Patch is recalled indicating there is a sequence stored with the Patch.

VI. Re-sampling

Re-sampling is a term used for combining multiple samples into a single sample or re-recording samples to another pad while adding effects. By re-sampling, you will be able to play more than four samples at once because multiple samples can be combined to one pad. Re-sampling with effects will help make your samples unique and also free up the effects processor to do other things, like play the analog synthesizer.

Use the following procedure to combine multiple samples into a single sample:

1. Press SAMPLING.
2. CURSOR down to Start/w and rotate the VALUE/TIME dial to select "PAD."
3. Press SAMPLING again to display "Waiting Signal."
4. Select the samples you wish to combine by pressing the appropriate pads. Up to three samples can be combined at a time and sampling will begin automatically as soon as the first sample is played.
5. Press SAMPLING again when you are finished.
6. Play the pad to hear the result. Press ENTER/YES to keep the new sample or EXIT/NO to try again.

Use the following procedure to re-sample an existing sample with effects:

1. Press the FX ON/OFF button so it is lit.
2. Press FX INFO and rotate the VALUE/TIME dial to select the desired effect. Press ENTER/YES to confirm your selection.
3. Hold SHIFT and press SCRUB until the PAD indicator above the fader is lit.
4. Press the EFFECTS button above the MIC/LINE (PAD) fader so it is lit.
5. Press SAMPLING.
6. CURSOR down to Start/w and rotate the VALUE/TIME dial to select "PAD."
7. CURSOR down to FxLoc and rotate the VALUE/TIME dial to select "SEND/RETURN" or "INS RECORD" depending on the effect you have chosen.

   Note: When (FX PATCH) is selected, the SP-808 will automatically select the routing that is appropriate for that effect. If you have chosen an INSERT effect, all of the effect buttons above the faders will light. When a SEND/RETURN effect is selected, only the MIC/LINE (PAD) effect button will light. This is an easy way to determine the type of effect you have selected.

8. Press SAMPLING and then play the pad(s) you wish to re-sample with the effect.
9. Press SAMPLING again when finished.
10. Play the pad to check the result. Press ENTER/YES to keep the new sample or EXIT/NO to try again.

VII. Track Recording

Along with all of these cool sampling features, the SP-808 can function as a four stereo track hard disk recorder. This allows you to create songs from your samples or to record directly onto a track from the MIC/LINE, DIGITAL, or AUX input. There are three different types of recording:

STEP:	Allows you to record the pads directly to the tracks by touching the pads in the order you wish them to play. The playback length of the pads is determined in one of two ways; the trimmed length of the sample (SMPL), or by the selected note length (MEAS). If "MEAS" is selected, the playback length is determined by the note value that is selected (e.g., q [quarter note], e [eighth note], h [half note], etc.).
REALTIME:	Records the pads while the song is playing. The pads will record as long as you hold them down.
AUDIO RECORDING:	Allows you to record directly from the MIC/LINE, DIGITAL, or AUX Inputs.

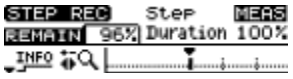

Fig. 7
The Step Record Screen

Step Recording

Step recording is great if you already have a lot of samples that are the same tempo (BPM). Before we start, it's a good idea to create a Tempo Map so that the samples line up properly. This will also be helpful for editing the tracks later. Use the following procedure to create a Tempo Map:

1. Press SONG/TRACK.
2. CURSOR down to TEMPO MAP? and press ENTER/YES.
3. Rotate the VALUE/TIME dial to match the BPM of your samples, or play the pad that uses the BPM that you want to match and press ENTER/YES.
4. Press PLAY to return to the main screen.

Now let's record some samples to track 1 using the STEP recording method:

1. Press PAD BANK and use the VALUE/TIME dial to select the desired bank of samples. Then, press ENTER/YES to select it.
2. Hold SHIFT and press STEP (EVENT REC).
3. displayed (see Fig. 7).
4. Rotate the VALUE/TIME dial counterclockwise to select "SMPL."
5. Press the pads in the order you want them to play back. If your samples are the same tempo as the Tempo Map, the SP-808 will automatically place the samples at the correct bar and beat.
6. Press STOP (■) when you're finished.
7. Press STATUS (TRACK SELECT) A so that it is green (PLAY).
8. Press METRONOME (⏮) to return to the beginning of the song and press PLAY (4) to listen to the track.
9. If you do not like what you have recorded, press UNDO/REDO once followed by METRONOME (⏮) to return to the top of the song. Then, repeat steps 2-8 to try again.

Realtime Recording

Realtime recording is a great way to add samples to an existing track. The samples are recorded for as long as you hold the pad(s) down. The SP-808 features a quantize function, so if you play the pad a little off time, the SP-808 can correct it for you. This can be extremely helpful if you are having difficulty playing a particular section of your song in time with the metronome. Use the following procedure to record a track in real time:

Fig. 8
The Realtime Record Screen

1. Press PAD BANK and use the VALUE/TIME dial to select the desired bank of samples. Then, press ENTER/YES.
2. Hold SHIFT and press REALTIME (⏵) to display the Realtime Record screen (see Fig. 8).
3. Press STATUS(TRACK SELECT) B so it flashes red.
4. CURSOR down to Quantize and rotate the VALUE/TIME dial to select "q" (quarter note). You can also quantize using 8th (e) or 16th (x) notes.
5. Press PLAY (⏵). There will be a two measure count in before the music starts.
6. Press the pads in time with the music.
7. Press STOP (■) when you are done.
8. Press STATUS (TRACK SELECT) B so that it is green (PLAY).
9. Press METRONOME (⏮) to return to the beginning of the song and press PLAY (4) to hear the results.
10. f you do not like what you have recorded, press UNDO/REDO once followed by METRONOME (⏮) to return to the top of the song and repeat steps 2-9 until you are satisfied with the results.

Audio Recording

The Audio recording method is probably the easiest to understand because it is very similar to recording on a "portable studio" type multitrack recorder. You plug something into the recorder, hit record, and play your instrument. The SP-808 can record in a similar fashion. Use the following procedure to record a track directly from the mic/line input:

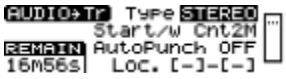

Fig. 9
The Audio Recording Screen

1. Hold SHIFT and press AUDIO REC (●) to display the Audio Recording screen (see Fig. 9).
2. Connect the audio outputs of a CD player or instrument to the LINE INPUT, or a microphone to the MIC input.
3. Adjust the INPUT or MIC level so that the meter peaks just under the dotted line on the screen.
4. Press STATUS (TRACK SELECT) C so it flashes red.
5. Press PLAY (⏵). There will be a two measure count off before the music starts.
6. Play your instrument/CD or sing into the microphone.
7. Press STOP (■) when you are done.
8. Press STATUS(TRACK SELECT) C so it is green (PLAY).
9. Press METRONOME (⏮) to return to the beginning of the song and press PLAY (⏵) to hear the results.
10. If you do not like what you have recorded, press UNDO/REDO once followed by METRONOME (⏮) to return to the top of the song. Repeat steps 1-9 until you are satisfied with the results.

Bouncing

Bouncing tracks is the process of combining multiple tracks to a single track. The idea is very similar to the re-sampling procedure we discussed earlier. It allows you to use one track to play back what used to require three tracks, enabling you to record new material on the previous tracks. This will free up more tracks for recording and play back. Use the following procedure to bounce tracks A, B, and C to track D:

1. Hold SHIFT and press AUDIO REC (●).
2. Press STATUS (TRACK SELECT) A, B, and C until they light orange (BOUNCE).
3. Press STATUS (TRACK SELECT) D so it flashes red.
4. Press PLAY (▶). There will be a two measure count in before the music starts.
5. Use the faders to adjust the levels of tracks A, B, and C as desired.
6. After the tracks have finished playing, press STOP (■).
7. Press STATUS(TRACK SELECT) D so that it is green (PLAY).
8. Press STATUS (TRACK SELECT) A, B, and C until they are off (MUTE).
9. Press METRONOME (⏮) to return to the beginning of the song and press PLAY (4) to hear the results.
10. If you do not like what you have recorded, press UNDO/REDO once followed by METRONOME (⏮)to return to the top of the song. Repeat steps 1-8 until you are satisfied with the results.

Recording With Effects

The SP-808 allows you to record an effect and make it a permanent part of your track. This allows you to use the effects processor for other tracks or samples. There are two different ways an effect can be routed to record: as an insert effect or in a send/return loop. The method you should use depends on the effect you are using. Insert should be used when you want to send your source signal into the effects processor and record the output of the effects processor without recording the dry signal. Some effects commonly used in an insert routing include distortion, slicer, and radio. Use the send/return method when you want to record a mixture of the dry and effected signal. Effects such as reverb, delay, and chorus are commonly used in a send/return fashion.

Use the following procedure to record samples to a track with an effect added to those samples.

First, let's create a new song:

1. Press SONG/TRACK.
2. CURSOR down to Create New Song and press ENTER/YES.

Now, let's name the song:

1. Use the CURSOR buttons to place the cursor and the VALUE/TIME dial to select the desired character.
2. Press ENTER/YES twice.

Now let's add the Radio effect to some samples and record the output to a track:

1. Press REALTIME EFFECTS ON/OFF so it is lit.
2. Press FX INFO, rotate the VALUE/TIME dial to select "P97 18>Radio," and press ENTER/YES.
3. Hold SHIFT and press MUTE (MIX COMMON).
4. CURSOR down to FxLoc and use the VALUE/TIME dial to select "INS RECORD."
5. Hold SHIFT and press AUDIO REC (●).
6. Press STATUS (TRACK SELECT) A so it flashes red.
7. Press PLAY (▶). There will be a two measure count off before the music starts.
8. Press the pads in time with the music and rotate the Realtime Control knobs to alter the effect.
9. Press STOP (■) when you are finished.
10. Press STATUS (TRACK SELECT) A so it is green (PLAY).

11. Press METRONOME (⏮) to return to the beginning of the song and press PLAY (⏵) to hear the results.
12. If you do not like what you have recorded, press UNDO/REDO once followed by METRONOME (⏮) to return to the top of the song. Then, repeat steps 5-11 until you are satisfied with the results.

VIII. Track Editing

Track editing could not be any easier on the SP-808. Crucial editing functions such as erase, cut, insert, and paste have dedicated buttons on the front panel for easy access. The SP-808 lets you select a range of material to be edited by simply pressing the REGION IN/OUT button at the appropriate locations. Then, just select the type of edit you wish to perform and your done. Use the following procedure to edit the track we recorded in the previous section.

Cut

Cutting a track will delete the portion of the track you've marked and move everything after the edit forward in time. This is ideal for removing entire sections of your song, such as a verse or chorus.

After recording, it is common to have some blank space before the start of your song. Use the following procedure to cut out any blank space at the beginning of track A:

1. Hold SHIFT and press STATUS B, C, and D so they are dark. This indicates that any editing will only be performed on track A.
2. Press METRONOME (⏮) to return to the top of the song.
3. Press REGION IN/OUT.
4. Press NEXT (MEAS⏭) or use the VALUE/TIME dial to select the location right before you want your song to start and press REGION IN/OUT again.
5. Hold SHIFT and press the RIGHT CURSOR (CUT) button. The edit happens immediately.
6. Press METRONOME (⏮) to return to the top of the song and press PLAY (⏵) to hear the results.
7. If you do not like your edit, press UNDO/REDO once. Then repeat steps 2-6 until you are satisfied with the results.

Erase

Erase is different from Cut in that when you erase a portion of a track, the track does not shift in time. Blank space remains where the audio used to be. This is really cool for breaks or drop outs.

Use the following procedure to create a drop out on track A:

1. Hold SHIFT and press STATUS B, C, and D so they are dark. This indicates that any editing will only be performed on track A.
2. Use the PREV/NEXT (MEAS ⏪/⏩) buttons or the VALUE/TIME dial to select the location where you want the drop out to start.
3. Press REGION IN/OUT once.
4. Press NEXT (MEAS⏭) or use the VALUE/TIME dial to select the location where you want the drop out to end and press REGION IN/OUT again.
5. Hold SHIFT and press the LEFT CURSOR (ERASE) button. The edit happens immediately.
6. Press METRONOME (⏮) to return to the top of the song and press PLAY (⏵) to hear the results.
7. If you do not like your edit, press UNDO/REDO once. Then, repeat steps 2-6 until you are satisfied with the results.

Insert
Insert will copy the material selected by the REGION IN/OUT points to any point in your song. Any material after the destination point will be pushed back in time to the point after the copied material.

Use the following procedure to insert the first two measures of track A at measure three:

1. Hold SHIFT and press STATUS B, C, and D so they are dark. This indicates that any editing will only be performed on track A.
2. Press METRONOME (⏮) to return to the top of the song.
3. Press REGION IN/OUT once.
4. Press NEXT (MEAS⏭) twice or rotate the VALUE/TIME dial to select measure three and press REGION IN/OUT again.
5. Hold SHIFT and press the DOWN CURSOR (INSERT) button. The material in bars one and two is now repeated at bars three and four. The material that was in bar three will now start at bar five.
6. Press METRONOME (⏮) to return to the top of the song and press PLAY (⏵) to hear the results.
7. If you do not like your edit, press UNDO/REDO once. Then, repeat steps 2-6 until you are satisfied with the results.

Paste
The paste function is similar to the insert function in that it copies material selected by the REGION IN/OUT points to another point in your song. The difference is that paste does not shift audio after the destination point back in time. If there is audio at the destination point, it will be replaced by the copied material.

Use the following procedure to paste the first two measures of track A at measure three:

1. Hold SHIFT and press STATUS B, C, and D so they are dark. This indicates that any editing will only be performed on track A.
2. Press METRONOME (⏮) to return to the top of the song.
3. Press REGION IN/OUT once.
4. Press NEXT (MEAS⏭) twice or rotate the VALUE/TIME dial to select measure three and press REGION IN/OUT again.
5. Hold SHIFT and press the UP CURSOR (PASTE) button. The edit happens immediately.
6. Press METRONOME (⏮) to return to the top of the song and press PLAY (⏵) to hear the results.
7. If you do not like your edit, press UNDO/REDO once. Then, repeat steps 2-6 until you are satisfied with the results.

As you can see, the SP-808 is an innovative product. It combines powerful sampling and recording features with a unique interface that is very musically oriented. We hope that this document has provided you with the tools you need to begin using your SP-808 to its fullest potential.

SP-808 SPECIAL USERS TIPS AND TRICKS MANUAL

General Tips

A patch in the SP-808 is an effect, i.e. reverb, compressors, etc.
Yes, the D-Beam can be shut off and assigned to any sound or effect parameter.
You really don't lose anything to resampling.
The SP-808 like any other digital hard disk recorder has limitless tracks because of resample and/or bounce that is performed in the digital domain!
HINT: The step modulator hooked to the Virtual analogue synth effects patch makes for a 5th sound... It can be played at the same time as 4 (8) voices... Here's what I do:
- I loop my beat on Track A.
- I add background pads or noise on B.
- I program the synth to play my bass line.
- I leave 2 voices open for live triggering.

Here are some tasty titbits on the SP-808 that they don't tell you:
I can pull off a resample or bounce more than 15 times without an unprofessional sound... But the enhancer in one of the effects parameters restores the loss no prob!!! Stomper like drum creation has already been simulated on the effects patches of the SP-808!!! Imagine 6 realtime controllers all at once completely desecrating a sound... then you resample this and set up a new patch and do it again... and again. The EQ, the centre canceller, the filter, and resample allows anything to be extracted... Then rebuilt using a compressor, EQ, enhancer... POWER!! RSS... what other sampler has 3-d with 2 speakers… Um... None!! The step modulator, the 6 knobs (a & b), the tempo, and the D-BEAM all modulate any parameter in the box, can we say please pass me clean underwear and a towel... Oh yeah all at once! Oh excuse me. Try this: stretch a beat loop sample to a low tempo, resample it, then stretch it again... This will clear up some of the extreme choppiness at high change of speed... (buys you about 10 BPM more) add a slicer effect and chop the beat loop into 16ths... Resample, set your auto trim for .5 seconds... VOILA!
Sounds time consuming but it only takes about 5 minutes!!!

I use the SP-808 in the studio to produce Hip Hop records. Here are some things that keyboard Magazine failed to mention before bombing the SP in the cons section of their review:
- It has an envelope workaround... using the virtual synth effect!
- It has graphic waveform editing... push Scrub on the waveform edit page on the start, loop, or endpoint numbers!
- Polyphony restrictions are taken care of by resampling!
- Velocity sensitivity is available if the machine is played from a MIDI keyboard or drum machine that is capable! Also a mis-researched bit of info for loopers.

It can play back while sampling, or loop while sampling from the inputs! I have done this on many live setups and in all studio sessions with live drummers and bass players.
This machine is only limited by imagination and poor song planning...
Thank you Roland for a new classic!

Status + FX A --> MIDI Update
Status + FX B --> Zip Update
Status + FX C --> Develop Monitor
Status + FX D --> Diagnostic Mode

I didn't see this in the manual but if you hit (Shift+Pad Bank) you get a graphic layout of the bank on the screen. Now use the value knob to scroll, you can see what pads have samples in any given bank before selecting a bank.

Syncing

Syncing the SP-808 will do nothing to help keep pad based loops in time. This is a common misconception about the SP-808. Sounds that are assigned to pads and triggered, either by hitting the pad or via MIDI notes (or even hits recorded to an SP-808 track) will not track tempo changes or in any way respond to either MIDI Time Code or MIDI Tempo. When you create a loop and adjust its length to a particular tempo you are merely fixing the parameters of the sample loop. Once set these do not change regardless of how you change the tempo map or any other tempo source (i.e. external sync). This is confusing as the setting of loops involves referencing a tempo - but that is only an aid to get things right at that particular setting. Syncing the SP-808 is for making the linear tracks play back in sync to an external source. The contents of these tracks (1-4) can be either recorded material or pad hits that were recorded. The timing of the start of any hit recorded is fixed in time according to its placement on the track. Using any form of sync, be it MIDI Tempo or MTC will only allow the SP-808 to know where it is WRT the time of playback. The SP-808 will not adjust the recorded information to follow these time changes nor will samples and their loops be adjusted. To best understand this think in terms of time, not tempo. The SP-808 cannot expand or compress time while it is playing back - with the exception of the varispeed, which is something else entirely. When play begins the SP-808 will go to the time that is currently specified by the timing source. But it expects this timing source to be producing ticks at regular, standard intervals, like 24 FPS, 30FPS, 29.xxFPS. While it may be able to do slight adjustments for drift in these timing signals the range is rather limited and would, if it did adjust, be accompanied by a slight shift in playback pitch. Tempo is nothing more than an agreed upon standard between the SP-808 and other devices as to how real time relates to musical time. The Tempo map is what does this conversion. When the SP-808 acts as a Master the tempo map is used to generate Song Position Pointer as well as the rate at which MIDI timing commands are sent, thus establishing a tempo. But the SP-808 is always operating internally on real time. So the whole tempo thing is just a convenient way of looking at time.
So, in summary:
- If you want synchronized playback use the SP-808 as a master and setup a corresponding tempo map.
- Loops must be set to work at the desired tempo and will not self adjust as tempo changes.
- Try to use one-shot samples as much as possible because their start will follow tempo changes.
So to do a one measure loop adjust the length to be one measure at the target tempo and just

trigger the sample at the downbeat of each measure. If you vary the tempo up slightly the sample will cut off early, likewise if you slow things down the sample will go silent briefly. But the start will always be in sync.
- If all you are doing is trying to trigger loops from an external sequencer then the easiest way of all is to ignore syncing and just insert the appropriate MIDI notes in the external sequencer track(s) to trigger the samples on the pads that you want to loop.

Drive too Busy Workarounds

1.) On track one - program a simple hi-hat rhythm in step record (realtime if you want.)
Cut and paste a few times and let it repeat.
2.) On track two - record your kick and snare in realtime, and set your quantize however you want to. I find it easier to use the Vari-Pitch at about 50% for fast beats, rather than recording them at normal speed.
3.) Now, cut and paste this a few times. Play back your two tracks now... Damn!
"Drive too Busy" error message again.
4.) Now here's the good part!!! Turn your Vari-Pitch down to about 25%.
Bounce tracks 1 and 2 to track 3. As you'll notice, you don't get the error message! The Zip drive is reading the disk at a much slower speed and therefore it gives itself time in between snippets to "catch up." If 25% doesn't work, go lower... 18%. If that doesn't work then your beat is really complex! After you get over the initial shock and awe, copy your 3rd track to the Clipboard, and then to a pad of your choice! The best way to get around a "Drive Too Busy" message, is to enter your sequence into the step programmer. Select the track to record, then hit Shift+Stop to enter into this mode. It will say something about "Multi" or "Single" or "Auto". Select Single. What this will do, is transform your intricate pattern into a single sample, and place this on the track, rather than a million individual triggers.

Also, another tip related to the "disk too busy" message. The problem: When I encounter the message, most times it is because I have sliced and diced my original loops too much (cut and pasted little parts of loops in various places) until there is several measures of 8th or 16th note data. At most useful BPM's the SP-808 simply CANNOT keep up.
The solution: Resample. Bounce to one new sample that comprises the many little pieces. Then the SP-808 can read it. Obviously if the SP-808 can't even read the data at a specific BPM, it certainly wouldn't be able to read and write it, right? Right. So to sneak around this limitation, resample the pieces with the Vari-Pitch feature turned on and turned WAY DOWN, to around half or even less of the original BPM. You could turn Vari-Pitch ALL THE WAY DOWN, but that makes for a time consuming resampling process. Give it a shot!

Obviously, the reason it gives you that message, is because it is attempting to retrigger the sample too many times, too fast… The way I get around this, is when you go into step-record mode, it prompts you as to whether you'd like to record the sequence in Single, Multi, or Auto mode. Select Single, and the sequence will be one big "step" rather than a ton of little ones.
Therefore, the SP-808 only has to trigger one step, so it won't give you the disk busy message.

Remixing

Q.) Also, being new to the SP-808, I have mostly concentrated on trying to "remix" tracks from my CD collection. Can anyone provide some high level tips on how they approach a remix project. I'd be grateful, I've got some great old school vinyl screaming for an update?
A.) Firstly always prepare "story board" for a remix. Sometimes you have DA'BESTEST idea, just write it down, song position, loop length etc. GET THE BPM RIGHT!!!!!! Record the stuff to tracks, use lots of bouncing. Keep all your bits and pieces at the beginning of tracks, and start your work at about 100th bar, that way you can always jump to the front, pick up a sample and paste it where it should be. Remember, there are only 4 tracks, but they are loooong, so parts of them can be used as "sample pool". Before you do any time stretching etc. you must decide what tempo your entire song is going to be and set it. This is called a "Tempo Map" you can find it under the [Song/Track] button menu. Next you must trim your samples to be the length you want them.
Also you must choose how the sample is going to play as a note, such as a quarter note or eighth note or sixteenth note. A whole note sounds an entire measure.
A quarter note would sound on 1,2,3,4 in a bar/measure an eighth note would be
one, and, two, and, three, and, four, and. This is important in the layout of different types of samples. Hard to explain on the computer - READ YOUR MANUAL.
Most of the time the SP-808 sets this correctly for you if you trim it right. Next you stretch to the length you want the sample to be (usually the same as the tempo map) so a drum loop that you want to loop every measure in a song that is a tempo map at 120 BPM would need to be whole note = 120 BPM. This is not the rock solid rule to make it work.
Really you stretch whatever until it sounds the way you want it to sound.
You can't cut and paste samples to start and stop wherever or make them sound only a percentage of their length to make it work as well. There's a million ways to do it.

Smoother Timestretch

Well, until recently, the only thing I could do on the SP-808 is time-stretch the sample.
If you have tried to change a sample, especially a beat, from 97 to 135 it's gonna come out kind of funny sounding with a lot of unwanted chorus effect. Well, NO MORE!

Step 1 is to figure out a sample's BPM by sampling it first, trimming it and seeing what the tempo is.(70 BPM in this case)

Step 2 is making sure you are currently working in a song that has the desired tempo (135 in this case).

Step 3 is setting your Vari-Pitch down to get the BPM as close to 70 as possible.
Make your sample, then turn off the Vari-Pitch and trim it. Voila!

You have now successfully raised the pitch and tempo of the sample without the nasty sound of timestretching. You can time-stretch them to the desired tempo if need be, because it's not by too much and it'll turn out fine.

Using Effects/Getting dry signal/External FX

Run the splitter out of the "phone" jack (using an adapter cord) into a crossfader or mixer. Use the "extra" jack to plug in your headphones. Now hook up your "master out" to the other channel on your crossfader or mixer. Assuming your loops match BPM, etc...
You can now start a loop, press Shift and play another pad (which will go through the headphones, not the master), let up the [Shift] key, and you can use the "hold" button on it.
Now use your crossfader/mixer to switch and/or fade between these two separate channels. Here is the clincher: effects don't "effect" what goes through on the "phones" preview. In other words, for a really nice effect, use the same loop on different pads and affect one and not the other. I hope you understand that this kind of gives you an extra "override" channel to play with. You still can't push it over 4 pads, but you can split them.

Actually that gives me an idea... You could resample a pad sent to an external FX unit via the headphone jack: have the headphone out going to an external FX unit, then have the FX unit going into the aux input. To get the pad effected with the external FX processor with out getting send return effect stuff happening (you know what i mean... I hope you do), you could have a track recording, then hold Shift and hit the sample pad you want to re-effect with the external FX unit (remember that holding Shift and pressing a pad makes that pad sent to the headphone out but not the master).

In playing with delay, I stumbled on something cool: if you use A07 "DL:Snd OnS," and make it effect only track A or B, (or to your liking) you can assign kick drums, snares and high hats to the pads in the first column, and tap them out... It will echo your tap every measure... This is a cool way to create progressive beats live, cheating the "4 pad max" rule. You still then have the three right columns of pads free (ALL FOUR POLYPHONY!!!) since the echo is an effect, playing your beat. You just hit "On/Off" to stop this convoluted, complicated, well structured mess.

Complex Breaks & Beats

I assume your concern is the ability to program complex breaks. here's how I do it:

1. Set up a pad bank of my individual drum sounds. (The four voices haven't been a problem yet as most D'n'B breaks you'll really only be using kick, snare, hats and maybe a shaker.) In sample parameter you will want to set the pad play to "drum" or "gate" depending on how you want to use the sound.
2. Program your pattern in a sequencer to trigger your drum bank.
3. Sample your pattern. If you set "start w/" to a level of 3 or so. Sampling will begin when you start the sequence. Don't set the pattern to loop in the sequencer and let your sample ride a bit past the end of your pattern.
4. Now edit your sample parameters, set the number of beats in the phrase, and
bring back the end point until the BPM matches your sequence.
(The start point should be fine because the sample starts at the attack of the first note.)

Check the loop to make sure the loop point flows smooth. It should match perfect.
Voila! A perfectly timed break!
5. Build from there... Now your phrases are ready to step out in the event step record.
I prefer to trigger the phrase from the beginning every time instead of holding the loop, because even the tightest matched loops can fall out of time and it sounds like train wreck! Precision timing is the key to making smooth Drum & Bass.

Jungle beats are basically a 95 BPM Hip Hop/R&B beat sped up to 170 BPM. Then add some distorted-triangle bass bombs. Furthermore, some argue that the bass bombs developed from reggae bass lines. If you've had any experience playing with a band, this advice may make creating this stuff easier. *most* D'n'B breaks (in a 16 step, 4 measure phrase) are based on: kick on 1 and 11, snare on 5 and 13 from there it's all embellishment and double entendres, etc... (try a 1/4 note synced hi-pass delay with feedback at 0 and tweak the FX level knob) add shaker/tamb. on 7-11, etc... After 32 or 64 bars...
A touch of overdrive, some compression, and a little reverb will get you a lot closer to that "sampled off a James Brown record" feel.

Fatboy Stutter

An easy and fast way to quickly find out the BPM of a sample is to trim the sample so it loops in CoolEdit or SoundForge and then open it up in Acid (even the demo version should do fine for this). Then set the track BPM in Acid (which is a matter of moving a slider and the sample will be matched). You can then change the loop properties and simply preview the sample in the bottom panel why sampling on the SP-808 with the auto trim option on, you end up with perfectly looped samples at correct BPM 's without having to do any guesswork or counting of BPM 's. If you’re already chopping a beat till it sounds like a smooth loop in Sound Forge you can highlight the loop then go to SPECIAL>EDIT TEMPO on the top toolbar. In the dialog box that pops up check MEASURE for the type, select MEASURES AND BEATS for the input format, the START, END, and LENGTH options will be automatically filled in based on what you have highlighted. Enter in how many beats are in the loop you highlighted then push the PLAY button in the box and POW!! At the bottom of the box is the BPM. Now the timeline above your WAV file will read the proper beats and measures for the BPM of your song. If your timeline is not showing the measures and beats, right click on the timeline and a pull down menu will pop up where you can select measures and beats as what the timeline will display. This is especially useful for tricks like creating Fat Boy Slim sounding blowups. With the measures and beats used in the timeline placing the I-Beam close to say the second beat and hitting "T" on the keyboard will snap the I-Beam exactly to the second beat. By punching CTRL+SHIFT+HOME on the keyboard you will select everything from the I-Beams location to the beginning, and pushing CTRL+SHIFT+END will select everything from the
I-Beam location to the end. Now you can copy and paste these segments back to back making shorter and shorter selections using the "T" method to get a precisely timed cut and string em all together to get a nice badaba-badaba-bada-bada-ba-ba-ba-ba-b-b-b-b-b-b-b.
Put the new sample on a pad on your SP-808.

This is cool, because I was actually experimenting with the SP-808 a while back, and sort of got a Fatboy Slim kind of thing going. Check it out, pick a sample, make sure it's on a loop, and set up some kind of external recorder hooked up with the SP-808. Now do this, get the sample, and open the trim thing. Now as you got the sample on hold, put the cursor on "StartPoint" or "LoopPoint" whatever you want (on the trimmer), and on the number farthest to the right.

Now as the sample is being looped, slowly turn the dial into the sample (clockwise) and you will notice the sample after a while gets shorter and shorter, and the "Length(>End)" number gets lower and lower, after a while it will get so short it will make that buzzing noise. Then the shortest you can go with the sample is when the length is 11, if it goes to 10, it will say that the drive is too busy. Then if you want to turn it back, just put the dial counter clockwise and the sample will get larger. I hope you guys understood this. It's just a fun little SP-808 trick.

If you put the loop point right after the "g" sound in the sample then send it through the synth using a square wave to modulate the VCA. This is awesome to slowly turn the LFO oscillator speed up and change the sound "ggggg_gggg_ggg_gg_g_g_g_groovy".
Make sure the depth of the LFO/VCA is at 100%. You get the "roovy" part of the sound when you let up on the pad (be sure to use pad trigger). BTW this works really well on the MC-505 too.
This is also quite easy using Sonic Foundry Acid with the snap-to-grid turned on. Zoom way in on the view and just paint down the bit of the sample. You can tempo sync the stutters.
Then save the track as a WAV file and use the SP-808 disk utility.

Chopping up Loops

To do this, bust out a calculator. Get the sample you want to cut up looping seamlessly. Now go into Sample Properties, and look at the sample length. For this, we'll say it's 52600 bytes. Now, divide that by 8 (or however many beats you want to isolate) to get 6575. Now what you've done is figured out that your sample is divided up into 8 6575 byte sections.
Eg: 6575|6575|6575|6575|6575|6575|6575|6575 Let's say you want to isolate this beat. (Assuming this is a 4 beat measure, these would be eighth-note pieces, and therefore, this would be the second beat of the measure.) Now copy the sample to another pad (press Shift-sourcepad-Clipboard then Clipboard-targetpad). Now go into the Sample properties, and make the Start of the sample 13150 bytes (which is 6575*2. This places the start at the beginning of the third piece of the sample). Finally make the Sample Length 6575 bytes.
You have now *PERFECTLY* isolated the third eighth-note of a 4 beat measure. This same process can be used for any sample of any length. Once you do this for all 8 pieces, (Or as many pieces as you need to isolate the snare, kick, hi-hat, etc...) you'll have the individual components of the sample, on separate pads. Now you can sequence them in whatever order you like, and it will be exactly the same tempo as the original! One thing to keep in mind with this method, although it generally works out ok, you should realize that if you're sampling a live drum loop, the drummer is rarely dead on, so it may be necessary to move you trim points forward or backward a little to get the entire hit. If you go by the exact numbers your calculations give you, you may lose the attack of the drum sound, or the tail (important in the case of open high hats or crashes). Other wise this method works well. Another tip. When you sample a drum loop you want to cut up, copy it to 8 different pads. That way you can cut up each one to get the 1/8th notes from the beat without having to worry about accidentally losing the rest of your loops.

BPM Matching

To quickly match a WAV file to a certain BPM, bust out the calculator that comes with Windows, and put in 240/x where x is the desired beats per minute. The answer will tell you how many seconds 4 beats is. This way, you can time stretch accurately. Example: if you have a 4 beat loop that is 2 seconds long, and you want it to be 140 BPM, put into the calculator, 240/140. You get 1.71428. Next, you go into CoolEdit, or something like it, and timestretch from your 2 seconds to 1.71428. The more decimal points you provide, the more accurate it will be for you.

PS: the number 240 comes from 4*60. That's because you want "beats per minute" to be (4 beats) per second. This means you can alter the 240/x to whatever you want. If you need 8 beats per minute, you could use a new equation, 480/x or you could double the answer to 240/x.

Loop Creation

I've actually found an interesting way to use it for loop creation. I set it to loop at one measure, and zoom in so that you've got 16th notes (16 steps in the measure), load up a whole pile of different single hits (24 bass kicks, 76 snares, 32 toms, 47 symbols, 4 congas, a cowbell and 2 gongs...) as your tracks, begin beat construction. Nice to make breaks with all the snares in the world, good to be able to change pitch/vol and FX envelopes on any given single hit. Then save as a WAV and all the beats get mashed together into one little loop.
Also fun to make it loop at 4-6 measures of mad frenzied beats, bringing different hits in and out over the course of x amount of time, run through an FX processor (or sampled to the SP-808 w/FX) and recorded.

It is possible, via the use of an external sequencer such as SEQ-303, or probably many other software or hardware sequencers as well, to trigger individual pads on the SP-808 and effectively "build" drum loops from scratch using the SP-808. While there are many other, and more convenient ways of doing so (Fruity, Acid, Recycle...), it is nice to push the envelope of capabilities of a machine we already own.
It might take a little chicanery to pull it off, but here's how I do it using SEQ-303:
1. Sample your drums. Single hits are admittedly too short in duration to be effectively used, as the SP-808's response time is slower than RAM based samplers. Maybe use one beat or two beat "mini-loops", the first bit of the "boom. . .chack" of the full loop.
2. Set up the SP-808 to receive MIDI pad trigger from external source.
3. In SEQ-303 set MIDI options to send external signal on the correct channel.
4. SEQ-303 has a really nice "random" function that will randomly assign values to each of the 16 steps for all of the different pages: note value, velocity, and pan.

Although the SP-808 will have trouble reading too much information, too fast and will (I'm sure we've all seen it) display the dreaded "disk too busy" message when playing back multiple tracks at too high of a BPM, it doesn't seem to have this problem when simply being triggered (pads) externally. I doubt that you would be able to record the results of the SEQ-303 triggered SP-808 pads if the BPM were too high, but give it a shot. I simply record the sequencer "playing" the SP-808 with my computer and transfer the file back into the SP-808 via the conversion utility using Zip disks.

Chords

A three notes chord wouldn't work, but try this instead! What if I put on a patch that gives the internal synth a long decay, then I go into Cakewalk and make the SP-808 play the three tones just a few milliseconds (just long enough for the FXs to hear the tone and hold it), then I'm sure we could get a three note layered chord. Maybe even holding a sustain pedal on the master board will work if the sustain messages are transferred via MIDI?
I've just been using Cakewalk with the main board. I'd play the chords, split them up and sample them as Cakewalk plays them on the SP-808. I put each part to a track, then bounce them to one.

I bounce that track to the sample and voila! I know it's a ton of work to get three not polyphony, but I've gotten some nice results. Especially when Cakewalk has your effects recorded and it plays the notes with the same effects.

Greater Vari-Pitch

Regarding the "Vari-Pitch percentage offset": if you want it to be 90% of the original speed, sample with vari pitch at 111%. You'll have to use the 32 kHz mode for this but I'm willing to bet you wont hear any degradation for the vast majority of applications. Honest, chances are your ears can only hear up to 15.5 kHz if you're over 10 years old. A 32 kHz sample rate has resolution up to 16 kHz. furthermore, since the Hz/octave relationship is logarithmic, you're only losing a few semitones when you switch from 20 kHz to 16 kHz anyway. In addition, you needn't worry about time quantisation either, as any granular synthesist will tell you the temporal threshold for human hearing is effectively .5 ms. If you go with my argument for 32 kHz, you can "Vari-Pitch" up to 137.8.

Seamless Looping

Just hit the TRIM button in the greyish area above the dial. Here you'll see START and END points and other stuff (use arrow keys to scroll down). First, go to START and hit the SCRUB button (bottom right of display area). This gives you a visual look at the sample, and also an audible 'frame' of any sound at the moment. Use the dial to scroll into the indentifying 'thump' of the bass drum. Once you think you're succesful, hit EXIT to return to the TRIM display and go down to END POINT. If you're any good with guessing timing/BPM you can just roll those numbers in till the BPM at upper right shows the proper BPM aprox. From here you can go back into SCRUB to 'fine tune' if you wish (find a 'quiet' gap) or scroll back up to START POINT and hold the pad to hear how accurate you are. Once you 'push and pull' points to get the loop to be seamless, you may find the BPM will say 132.39 or something wonky - and you really want to put it with that 130 BPM Drum loop you got on a CD. Press EXIT and hit SAMPLE/PLAY button at the top middle of the unit. Here you'll see options, scroll down till you see TIME STRETCH. Enter into this, indentify the bass loop pad as the source, and adjust time to become 130 BPM (Sometimes it's best to say 129.9 or .8 to make it come out right), hit ENTER and the correct timed loop will go to the next pad over. Now snag that drum loop, and follow the same procedures as above (you shouldn't have to worry about time stretch if it's accurate?) and voila!

EX OPSYS

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the EX OS differs from the info in the manual in certain places, so wait to upgrade till you know your way around. You won't figure out a lot of the trickier stuff (like bouncing and FX location) without the manual. Once you know how to record to a pad from line in, record to a track from line in, bounce-record each to the other, and apply realtime FX to both in send/return, master insert, and record insert mode - you've got all the basics down.
Don't worry about the MIDI section of the manual beyond using and external keyboard to trigger the VA synth, MIDI implementation on the SP-808 is none-too outstanding beyond a certain practicality for live performance.

EX features

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(1) Pads now transmit note-on messages. go to MIDI PARAMETERS and make sure
PAD TX or something like that is set to ON. I like this already. If you have other Roland gear that does RPS, imagine using the EX to trigger an SP-808 sample + RPS.
Pads can transmit on any channel 1-16. To state what may be obvious, all pads transmit on the same channel. To set the channel, SYSTEM/DISK-->Set MIDI Param-->Pad Tx Ch.
(2) C1-C3 transmit cc#16-18; C4 transmits cc#19; c5 and the left D-Beam transmit cc#80; C6 and the right D-Beam transmit cc#81.
All are transmitted on MIDI Ch. 11 (and this cannot be changed). Make sure you're transmitting your MIDI data: SYSTEM/DISK-->Set MIDI Param-->Mixer, Beam-->Send.
(3) Samples can be normalized.
(4) You can run the EX without a disk inserted. great for running other equipment through the EX's effects (or for using that kick-ass virtual monosynth. Way ballsier than my JP-8000) without popping in a disk. For tempo-synced delays and such, you can determine the BPM by pressing Shift and tapping the Hold key. the pads will flash in accordance to the BPM.
(5) FadeSw: Trimmed your sample but it still has that gad-awful click when you retrigger it repeatedly? FadeSw quickly fades out the end of the sample to prevent the clicks caused by mismatched waveforms. If you've used a sampler that multisamples, then you know what I'm talking about.

So the new effects as I see it are...
- Mic simulation Guitar FX
- Vocoder Vocal FX

Also, 4 new parameters in synth common:
- Mod->osc1 Mod->Tva
- Mod->osc2 Mod->Tvf

Anti-phase parameters in the isolator?
Vintage Flanger contains new FX modes, and stereo modulating parameters?
The vocal patches are great, but my new fave is the DJ voice patch.
You can pitch shift your pads (or inputs) in real time, using the D-Beam.
Yeah, but It's easier to control the pitch with an MIDI keyboard... (yeah it works...)

Shift & Song/Track = Pad To Track On/Off instead of MTC, Master/Slave.
Shift & Quick Edit Level = still Pitch Shift BUT all the effects on lights light up.
Shift & D-Beam pitch now sets up the auto beam adjust. If you hit Shift & D-Beam effects you get some weird screen that locks you out of your current effect.
The samples and bounced tracks seem tighter and that little delay on the clipboard seems to have disappeared. I like normalize and the new bank parameter features.
I switched back to the old OS did a bounce copied to a pad then reinstalled the new OS and did the exact same thing. The loop with new OS was way tighter!

You can now use a pitch bending wheel/lever with the synth patches.
You can also assign different MIDI channels to the FX (not just channel 11!)
The lights of the new OS correspond to the BPM.
Hold down SHIFT and tap the HOLD button, and you can adjust the BPM.
Now you can run your other gear through the SP-808's effects and synchronize delays and whatnot to the beat. Neat-o peachy keen!

1. Shift + Region IN/OUT = Adjust Timing menu
2. Shift + the "Sampling" button + pad 1-16 = sample delete
3. Shift + effects (D-Beam) = VA synth patch

Using Pad-Track

With Pad --> Track engaged...

A B C D <--------- Volume Fader on SP-808 face
To
Track A B C D <--------- FX Patch (master insert)

A B C D ----------> Track sub outs (OP1 board)

A B C D <--------- FX Patch (Channel Insert)

A B C D <--------- Master Volume Fader

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13 14 15 16

9 10 11 12

5 6 7 8

1 2 3 4

PADS

Crossfading

"Pad To Track" can be toggled by pressing "Shift" and "edit Song/Track".
If you mean Xfade of one sample, turn "Pad To Track" on and turn "FadeSw Track X" within the Edit Song/Track Menu on, "X" being whatever track that pad works out to be on.
If you mean xfade from one sample to another, turn "Pad To Track" on and then the fader for track X or Y corresponds to pad bank row X or Y. you can then crossfade, albeit manually, by using the faders.

Using the Vocoder

There are 4 ways to use the vocoder patch:
1. Mic = source, line in = modulator
2. Pad = source, pad = modulator
3. Mic = source, pad = modulator
4. Mic = source, track audio = modulator

Here are the instructions for each method.
1. Mic = source, line in = modulator
- note: only audio on the (Right) side of the line input is used for modulation.
- I'm not sure but, I believe the left input can be used as a source, instead of the mic.
- anyway, talk into mic while playing synth into line input. Done.
2. Pad = source, pad = modulator
- "Shift"+"Mix Common"
- scroll to FxLoc. change to (INS MASTER)
- Shift+Track A effects button change Track A balance to (L63)
- Shift+Track B effects button change Track B balance to (R63)
- "Shift"+"Song/Track" this activates the "Pad To Track" option
- press and hold a pad in first row (pad 1,5,9,13)
- press a pad in row two (pads 2,6,10,14) Done.
3. Mic = source, pad = modulator
- press "Shift"+"Mix Common"
- scroll to FX Loc. change to (INS MASTER)
- press "Shift"+"MIC/LINE" effects button, set balance to (L63)
- scroll further down to pad balance, set to (R63)
- talk into mic while holding down a pad. Done.
4. Mic = source, track audio = modulator
- press "Shift"+"Mix Common"
- scroll to FX Loc. change to (INS MASTER)
- press "Shift"+"MIC/LINE" effects button, set balance to (L63)
- press Shift+Track A effects button change Track A balance to (R63)
- make sure status is enabled (green light) for Track A
- playback track while talking into mic. Done.

The vocoder channels adjust the volume of each frequency band (increments from 0 to 100). "This setting adjusts the tone of the vocoder."
The central frequency bands for each channel are:
1 = 100.0 Hz
2 = 166.8
3 = 278.3
4 = 464.2
5 = 774.3
6 = 1.292 kHz
7 = 2.154
8 = 3.594
9 = 5.995
10 = 10.00

FadeSw

When Phrases using only bass sounds or other such sounds are played continuously on a track with no space provided between the Phrases, a small amount of noise may crop up at the points where one Phrase ends and the next one begins. In such situations, using the procedure below to set "FadeSw" to ON may improve the sound.

1. Press [SONG/TRACK]
2. Select "Set Song Param?" and press [ENTER/YES].
3. Select "FadeSw" for the desired track, and rotate the VALUE/TIME dial to set this to ON.
4. Press [PLAY] to return to the HOME screen.

Technical Note: When "FadeSw" is set to ON, the SP-808EX subtly shortens the Duration of each Phrase in a continuous string of Phrases in response to the tempo.
This speeds the operation of the SP-808EX's Fade Out function, and helps suppress noise at discontinuous points in waves. Note: This effect may not be achieved if the noise is contained in the Phrase itself.

Diskless Mode

Yes, you can use the effects without a Zip disk in the drive with the new OS.
It's called "diskless mode."
You can also use the effects in sync with a tempo: repeatedly press [HOLD] while holding down [SHIFT] until you arrive at the desired tempo.
Also: Hold down [SHIFT] and press [VARI PITCH], then use the Value/Time dial to set the BPM. The pad lights up in sync with the tempo.
Buttons related to editing, track settings, and sampling are disabled in diskless mode.

Light Show

And BTW, RE: the nifty little light show that plays when you start up the new OS with no Zip in the drive: By holding down [PAD BANK] and pressing a pad, you can select sixteen different light patterns in diskless mode.
If you don't want the "light show," hold down [PAD BANK] and press pad #16.

Tie Function

The tie function is derived from musical notation. Whereas a quater note (for instance) needs to sustain, in tablature it has a horizontal tie to the next note. The TIE feature is also found in the VA synth (both SP-808 and EX.) When developing patterns by setting each step as a note, you can select any step following a note with a TIE, which is right by the REST function towards the lowest position.
All this said, essentially, the TIE feature in step recording is just letting the processor know that it has no reason to reload and play the same sample there by reducing load on processing. The sad part of this is that now, once recorded, you're stuck with one large sample. This means you can select exact sections of the track for volume adjustments and various other easy cut and paste type jobs to perfect your track. It's a give and take thing.

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(1) Set the position in the song where recording begins at the top of any measure
(2) Hold down [SHIFT] and press the [STOP] button, the "STEP REC" screen is called up.
(3) Press [STATUS] on the track you want to record so that its red light flashes.
And you're there.
Pressing [PLAY] holds the phrase in the preceding step over to the current step (Tie).

The FF (>>) button is for RESTS too. So if want 8 bars and a 2 bar break say, follow what explained above and at bar 9 hit FF, and hit it again (for 2 bars).

Normalise

EX manual, p. 65: "Raising Sample Levels As Much As Possible (Normalize):
Normalize is a function that brings up the level of the entire sample as much as possible without exceeding a predetermined maximum level."

Mute Groups

To cut into different loops in realtime, right?
In the sample edit page, go all the way to the bottom and turn on to 1. Hit the pad beside (for instance) and set it to 1 also. Exit out, and play the one pad, and hit the other pad. First pad shuts immediately off, as the second one plays. With some fast rhythmic fingers, you can pound out some unique breaks and fills. Of course, other pads can be assigned to higher Mute #'s and react the same way as the earlier loops, but will not interfere with other mute groups of different #'s (IE: Drum loops assigned to group 1, Bass loops to group 2, Synth hits to group 3, etc.). Then just hit Realtime Record, and wail on those drums.
Go to track 2 and wail those basses, etc.

Using the Clipboard

Press and hold the sample to be moved, then press the Clipboard pad at the same time. The Clipboard pad should illuminate and the sample pad's lights go out. Then press pad bank followed by the bank number you want. then press and hold the Clipboard pad again then press the pad you want it to go to, the Clipboard light goes out and the new pad light's up. Same procedure by holding Shift will copy the pad to Clipboard.

Controlling\Pitch Shift with MIDI notes

The new Pitch Shifter on the SP-808EX you can control with MIDI notes.
That is, loop a sample on a pad (or Hdrec Track or live input) and control the Pitch Shift effect with a MIDI keyboard.
Limitations:
- Cannot start samples with the note-on events you control the Pitch Shifter (unless you have a keyboard, with that you can split two zones on the keys and assign two midi-channels on these two zones and then start on say zone 1 and control the pitch with zone 2)
- You can play only two octaves, but this feature is great for special FX.
It's actually a mono synth with samples...

MIDI Loop

(1) Use a MIDI cable to connect the MIDI out/thru to the MIDI in on the SP itself
(i.e., create a loop)
(2) Set the Pad Transmit Channel to 11 (System/Disk --> Set MIDI Paramters)
(3) Dial up an FX patch using the analog synth (e.g., A99) and turn FX on.
(4) Play the pads like a keyboard.

Shortcuts from the EX Manual

'ADJUST TIMING FUNCTION'
It's possible to recall it by simply holding down [SHIFT] & pressing [REGION IN/OUT] button.

INSTANT RECALLING OF A 'VA SYNTH' PATCH :
Hold down [SHIFT] & press D-Beam Controller [EFFECTS] button to instantly recall a preselected synth patch.
(With the factory presets this patch is A62 'SY>BEAM#1')

SETTING UP 'D-BEAM SENSITIVITY' :
Hold down [SHIFT] & press D-Beam Controller [PITCH] button.

DELETING A SAMPLE WITH 'SAMPLING [START/STOP] button/pad :
You can erase a sample from a pad by firstly holding down [SHIFT] & pressing SAMPLING [START/STOP] button/pad, then hit the pad you wish to delete.

SP-808 WAV Converter software with SP-808EX

With the SP-808EX or SP-808 classic upgraded to EX, it is necessary to record some (as in 1 second) silence on a newly formatted disk or else the conversion software won't recognise it.

Mastering

Three types of Mastering: Pre mastering, Final mastering and Commercial mastering.
Pre Mastering: This is when you the artist "Mixdown" your tracks to a two track master. You can do this at home if you have a mixing console, or it can be don professionally when one records their tracks in a larger studio. Basically you are setting already recorded levels and EQ of your individual completed tracks (bass, drum, vocals etc) and 'mastering' the overall mix. At this point many will add the reverb etc (especially on vocals), compression, limiting etc on tracks that seem to punch through the mix too loudly (vocals, horns). We synth guys don't deal much with this because we usually set the levels correctly in the sampler or synth prior to committing that part to the multi-track recorder, and don't mess much with it after that. Once we are satisfied, we mix the entire thing down to a two-track master (either tape, CD as in my case, to a WAV file within Sonic Foundry Sound Forge). This is the stage where all that fancy 'automation' comes in on mixing consoles. You can set individual EQ levels, effects, etc for each channel (providing each sound has it's own channel on a large mixing console), and do so until all channels are set properly. On motorized consoles you will see sliders moving up and down for the tracks that you previously 'monitored' while you continue the 'mixdown' process. When all is done, and you commit to a two-track format, your Artist portion of the mastering process is complete. This kind of mastering can be cheaply done at home, or can be extremely expensive (upwards to two hundred fifty dollars and hour) in the largest automated studios. My friends recently spent 2400 dollars 'mastering' their last album, in which they recorded everything into Logic audio at home, then took the completed audio files into a larger studio with logic running through a bigger, nicer mixing console.
The quality of the results are all very subjective, but it holds true that you will get a better master if you separate your individual sounds into separate channels and commit them to individual tracks on the multi-track recorder and 'mixdown' to master from there.

This is why many go into larger studios to 'master'. They simply don't have the money to afford the outboard gear that the pro studios have. Some of the consoles in these studios have 6 band sweepable EQ, are automated, and cost upwards to the 200,000 dollar range. The monitoring systems in these studios are also superb, using such monitors such as Genelec, which can cost near 8000 apiece. Money doesn't make a great mix though. It takes a good ear and patience, plus a house engineer that is creative and gives a shit, and understands your music goals, 'cause if they don't, they will waste your time and money and give you a mix no better than you could have gotten out of your home studio. I have heard great masters come straight out of Cubase VST audio (using VST automation of course). Finalizing: This is where audiophiles and tweak phreaks go to a pro-studio (usually) and use all the fancy shmancy outboard (usually outboard, but it can be done with computer plug-ins as well if your 'pre-master' is in WAV file format and you have an audio editor like Sound Forge. I like to use TC Native EQ, and Timeworks Mastering EQ as well as Waves products, which I have used extensively to improve my overall mix), gear to boost certain frequencies, add stereo separation, increase clarity and spaciousness to their completed 'pre-master'. You are not recording anything else at this stage of the game, just improving what is already there. The bigger studios are using products such as a TC Electronics Finalizer (on the low end of the price spectrum) all the way up to more expensive gear, which I have never used, but falls in the price range of 10,000 grand for one rack mount box. This pre mastering phase can be done at home as well, or you can go into a larger studio and take advantage of all the good stuff to make your pre-master sound "bigger", so to speak. Remember though, garbage in, garbage out. If the original pre master sucks and wasn't performed correctly, no amount of sweetening is going to fix it. It will simply sound like a big, wide-open shitty mix. Commercial Mastering: What is says. Your completed Finalized master is taken from whatever format you recorded it to (DAT and CD usually these days) and is transferred to whatever medium the end user (consumer) is going to hear, be it 12" vinyl, or CD (or cassette... yeach... if you are a DJ type pushing ya mixtapes... but most never go to the second stage cause the songs they recorded were already pre mastered to begin with). This process involves taking your master, and simply duplicating it. Not much EQ'ing should ever be done at this stage, and if it need be, the engineer at the reproduction plant will usually inform you of what needs to be done, get your approval, then charge you for having to do what you should have done in the 'Final-mastering' stage. This rarely occurs with CD's and DATS, cause you can run them way over 0db with no distortion, and the plant engineer will simply lower the levels when duping from it. They again may charge you a nominal fee. The big problems lie in vinyl, and this is because of the high sibilants involved with higher frequencies recorded to CD and the problems that occur when transferring to vinyl. Basically, the higher the freq, the smaller the groove will be cut into a record. Crash cymbals are notorious for transferring from CD to vinyl incorrectly and will cause a groove to be cut that is smaller than the diameter of your standard record player stylus. Because of this, the needle will skip out of the groove, so the mastering plant engineer will contact you and tell you that they need to 'DE-ess' some of the sibilants out of the mix while 'cutting' your master plate (that which the vinyl copies or duplicated from usually made of aluminium). This is quite common today, because so many people are cutting vinyl from cd's rather than tape (less high end definition) which was the old school way of pre-mastering'. Because of this commonality, they usually don't charge you anything to fix this minor flaw.

External Sequencers/Triggering Samples

Samples can be triggered in the SP-808 with Notron no problem, and the SP-808 responds to velocity information from external sources, but little else – the Notron seems like it is designed more for controlling sounds in a MIDI engine,rather than using MIDI to trigger samples

(you don't have as much tweekability with the sound in terms of decay, reverb, chorus, nuance, etc. when you are using samples in the SP-808 rather than samples from an internal MIDI engine).

Copying FX files

Transfer FX from one Zip to another without additional Zip drive
(Overwrites any existing patches on target Zip, though)
Put the Zip disk in that has the FX you want.
there is a directory called "Song0000.vs2"
if you go into the directory, there is a file called Effect__.vs2.
Copy the file to a temporary directory.
Copy the file onto a SP-808 formatted disk.
It will bring up all 100 user-defined patches from the other disk.

Diagnostic Mode

This mode allows you to check the functionality of every component of your SP-808.
1. Start with power "Off"
2. Press and hold the TRACK D STATUS button and the EFFECTS button below.
3. Turn power "on" (still holding the buttons)
4. Hold the buttons for approx 5 sec. until the display reads "checking SP-808 op-1"
5. Use the cursor buttons to select which part you choose to test and press enter.
6. Feel better now that you know your machine is OK! (or worse if it doesn't check out!)
7. The numbers at the top of the first screen represent what OS version you are running
8. Its safe to turn off the machine anytime during this test as long as there is no disk in the drive, and that it is not in the middle of a test.

REMEMBER! DO THIS AT YOUR OWN RISK! Although I've never encountered a problem.

Save OS with Zipdisk

IMPORTANT! Remember to format a Zip disk to store backup on before saving-it will not give you the option!!
1) Power Off.
2) Push 1/[5] + CLEAR below LOCATOR at same time.
3) Switch Power On.
4) "SAVESYSPROG insert disk" is displayed.
5) Insert New SP-808 Zip disk.

This can be used to copy the operating system from an SP-808EX, and to update the original SP-808. Use the tip below to install your OS via Zip disk.

Update OS with Zip disk

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1) Power Off
2) Push and hold the buttons:
[STATUS (TRACK SELECT)]+[EFFECTS (BAL/EQ/FX)] above Track B at same time.
3) Switch Power On
4) "ZIP DISK UPDATE insert system disk" will be displayed.
5) Insert system disk
(Use this to update your SP-808 operating system to an EX operating system)

Upgrading Zip/Jumper Settings

Changing out the 100MB Zip drive for a 250MB Zip drive
Obviously: Disconnect the power supply and all other cables from the SP. Observe the usual precautions about electrostatic etc. As you disassemble the SP, keep the screws in three separate piles as you remove them. Prepare places beforehand for all three sets so you don't lose them or get them mixed up. Turn the SP over and rest it on something soft and pliable, like several towels, so that the knobs on the panel are not subject to unnecessary pressure.
(1) Remove all the screws in this order:
a) Removing the SP's bottom plate: Remove the 13 screws on the bottom of the SP. Do not remove the two screws in recessed holes at the top; these can stay put.
Don't forget the interior screw just above the middle rubber foot at the bottom. Note that not all holes have screws in them (at least on my unit).Lift off the bottom plate; it should slip off easily. Put it aside in a position allowing you to remember which way it fits.
b) Removing the Zip drive housing/frame from the inside of the SP: [I found it easier to remove the power cable and ribbon cable from the old Zip drive itself if I first removed the screws holding the Zip drive housing/frame to the inside of the SP, it's just easier to get a grip on the cables.] Remove the 5 screws attaching the drive housing/frame to the inside of the SP (2 on the right, 3 on the left) the screw on the upper left is a little hard to get to if you don't have small fingers. When you've removed these screws, the housing/frame still won't come out all the way because the cables are still attached to the Zip drive inside it.
c) Removing the Zip drive itself from the drive housing/frame: The Zip drive itself is attached to the drive housing/frame with 4 screws, all on the top of the housing. Remove these screws and put them aside. The Zip drive will now be loose, but because it still has its two cables attached, you can't lift the Zip drive all the way out.
(2) Remove the two cables connecting the old 100 drive with the SP innards:
a) the power cable (You will want to reattach it to the 250 drive the same way it was attached to the 100, so leave it in a position that makes that easy to remember.)
b) the ribbon connector (Same as above, though the fit inside the SP is so tight, this connector will remain pretty much in the same position.)
(3) Remove the old 100 drive from the drive housing.
(4) Put the two drives side-by-side for comparison and install the jumper into the 250 drive to set it to Master just the way it is already installed in the 100 drive. The drive comes from the factory set to slave. On the back of the Zip drive, between the ribbon cable port and the power-cable port, there are three rows of two pins each. If the Zip drive is lying on its back, the power cable port will be on your left, and the ribbon-cable port will be on your right. The three rows of two pins each will be between those two ports. You'll see that the first row of two pins on the left is covered by a little jumper. This jumper should have come with your 250 Zip IDE drive (mine came in a little zip lock plastic bag). If you're unsure, you can hold the jumper up to the one on the back of the 100 drive you just removed to see how it will fit onto the two left-hand pins on the back of the 250. Slip it onto the two left hand pins on the back of the 250 to cover them. Press firmly till it is seated. This sets the Zip drive to Master. The backs of the two drives should now look the same. Now the whole process is exactly reversed: slip the new 250 drive into the drive housing/frame with the cable ports to the back.
(5) Reconnect the two cables to connect the new 250 drive with the SP innards (a bit easier in the following order):
a) the ribbon connector
b) the power cable

(6) Screw all the screws back in (in this order):
a) to secure the Zip drive itself to the drive housing (4 screws on the top of the housing)
b) to secure the Zip drive housing to the inside of the SP (5 screws on the bottom, 2 on the left, 3 on the right)
c) to secure the SP's bottom plate back to the bottom of the SP (13 screws; the one with the washer goes at the top left)

Example Setups

Here is my setup. I record, edit, compose, and compile songs into the SP-808 (about 1 song per Zip). This is original material. I use about 5 synths and 2 drum machines plus FX processors for all, and run the whole thing into the SP-808. I use the internal synth for accents. Next I decide on a playlist (original songs and selected artists). When I decide on the order, I go into the SP-808 disks and set up new songs, which contain nothing but the BPM setting for the other artists. Then I name the songs accordingly, so I can dial them up by name. When everything is in order, I program the effects and synth riffs for my remixes of other artists, and save them on the same Zip where I defined the songs by BPM. For performance I play and remix my original songs, but in-between Zip swaps, I play my CD selections on the lineout through another mixer (to avoid the SP-808 cut out) and run the headphone jack back into the SP-808 Line-In, so that once it comes up, I can start using the FX on the SP-808 to effect the CD. I do the same double routing with the record player (run into the mixer/preamp, and use the tape/aux out on the mixer to send to the Aux-In on the SP-808). This is the best combo that I've found. It runs smooth and avoids the SP-808 cut out at the same time. You can even shut off the SP-808 on the mixer, sample in from either CD or record player (on headphones), then sync to the current song and spit out the sample into your mix.

I haven’t had any trouble with clicks from the SP-808 itself. However, if the waveform of a sample does not start or end at the centre of the meter you will hear a click. This is where an editor comes in handy. Same thing goes for a loop point, if two points of the waveform do not match up at the centre you will get a click. Typically though, all my gear runs into the Mackie 1202. Then, like you said, I use the Alt 3-4 outs to feed the inputs on the SP-808 (or S3000XL depending on what I'm doing). Using the Alt Outs on the Mackie makes long sessions so much easier, all you have to do is press a button on the mixer channel you want to sample! Saves a lot of time on repatching for the same purpose. Another thing that's nice is that you can monitor just the Alt 3-4 send on the Mackie through the phones or your Control Room outs, nice touch when tweaking your levels just right for sampling. Then I send the SP-808's outputs to the Mackie on channels 11/12. MIDI wise, it changes on what I'm doing. Usually I'll have two different setups, one for writing a track, and one for recording. When I'm writing, I usually set the 505 to be the master, with the ER-1 being the slave. The writing setup starts with MIDI out of the 505 to MIDI in of the Er-1, MIDI thru from the Er-1 to the MIDI in of the CS2x. MIDI thru from the CS2x to the MIDI in of the S3000XL. Also, I send a cable from the MIDI out of the CS2x to the MIDI in of the 505, for note input. The SP-808 never even gets turned on for this part of the process. For recording, the SP-808 takes the lead role and is the master. Both 505 and Er-1 are slaves this time. MIDI out from the SP-808 to the MIDI in of the ER-1. (I'd like to go through the 505 at this stage, but it doesn't transmit MIDI clock messages through it's soft thru, grrrr.) MIDI Thru from the Er-1 to the MIDI in of the 505. MIDI out from the 505 to the MIDI in of the CS2x (always set to respond on channel 1). MIDI through from the CS2x, to the MIDI in of the S3000XL.

I use an SP-808 "EX-ed". I don't use any sequencing, its all realtime. I run a MIDI fader box into it. I use the MIDI faders to control the pan assignment of each track. I then run the "l" into one channel of a scratch mixer and the "r" into the other channel. I use a Numark Pro SM1.
The SM1 gives me rotary kills on each channel as well as a grab switch on each channel. I have the 2nd grab switch input on each channel run in parallel with the 1st grab channel. But, the 2nd grab channel runs thru a good FX unit. I use the remaining 11 MIDI faders and 16 buttons (5 faders were used as SP-808EX panners) as realtime controllers for the FX unit. (This is all in an effort to do everything that DJ's can do, better. My rig is almost as portable and easy to set up as 2 turntables and a mixer, but much more powerful). I use the 808 live with absolutely no sequencing at 32 kHz sampling rate. I use the lower sampling rate because there is no audible difference in sound quality (arguably in the studio, but certainly live). But, the lower sampling rate allows Vari-Pitch to go up to 137.8% of the original speed. A MIDI fader box is used to pan channels A,B,C,D and line. The "left" channel from the master goes into channel "1" of a scratch mixer. The "right" channel from the master goes into channel "2" of a scratch mixer. The phones jack is split into (2) mono channels "left" and "right". Each of these is run through its own independent FX line via a single good FX unit. The "wet" lines run in parallel with the "dry" lines directly from the 808, but they are on the other side of the scratch mixer's grab switch. This enables not only crossfading and tricky mixing of material, but also extremely dynamic effects use. I present this method to offer up my argument that the 808 is one of the best live performance instruments (for loop-based music) in existence. If it were not so, then it would be nearly pointless to own one. We'd all be better off with just computers. The phone out is split into "left" and "right". I don't use the aux out cuz it doesn't include the 808 FX and that confuses me live. Cuz I cant PFL the "808-wet" signal in that setup. But I do use the aux in: the zone out from my mixer goes into the aux in for realtime sampling through the FX unit. Since the phones out is used on the 808, I monitor the whole setup thru the mixer's phone out.

I am working my way into using 2 808s live, plugged into either side of a scratch mixer.
I think it's useful to think of the 808 in terms of what it is capable of in contrast to a more traditional sampler like an MPC. This sheds light on how to exploit it best, since the "traditional" techno/hiphop production methods often don't work so well with it. In comparison to an MPC, the 808's MIDI handling is weak. But the amount of sampling space the 808 has puts the MPC to shame. So I use that to my advantage. Many pads are of identical phrases, but with various effects/instrument combinations applied. I think of it as an all-audio MIDI sequencer. MIDI msgs are hopelessly vague and "square" compared to audio information. I just dont think a digital spec from the days of the TRS-80 that was originally designed to plunk in piano melodies is as applicable to the music being made now. Furthermore, I always use a 32kHz sample rate live. this way, I can Vari-Pitch up to 137.5% (especially useful if you're trying to drop in to a 175 BPM set and your set is at 171 BPM.) One exercise I have been doing with 2 808s to enhance my live "chops" is to record an 8-beat phrase from a record found on the fly, the cheesier the better. (I used "afternoon delight" by starland vocal band as an extreme test) As soon as I grab it, I loop it immediately. Then I start deconstructing it in realtime by sampling/effecting bits of it, crossfeeding between the two 808s. If you take even 50% advantage of the power you have, it is not too tough to turn a sample into something both completely different and interesting, but still vaguely timbrally recognisable as the original. And all without interrupting the rhythmic flow of the "song".

Cool Effects

LofF . Bit/RateDown
PreFilter - On
SampRate - 1/16
Down to... - 16bit
PostFilter - Off
FX Level - 75
Dry Level - 0
Fil . Filter
Type - Notch
Slope<oct> - -12db
Cuttoff - -12db
Resonance - 0db
Gain - 5db
NS. Noise Suppress
Threshold - 30
Release - 57
CTRL
C1 - Fil ON Type
C2 - LoF ON Bit
C3 - LoF ON PstFlt
C4 - Fil ON Cutoff
C5 - LoF SampRt
C6 - LoF On FX Lev
StM1 - On SampRt
LOC
PatchLoc - INS MASTER
Mixer... [<FX PATCH>]
From here you're on your own. I have the Sample Rate set for StM1 for sequencing changes in the sample rate in time with the music. Depending on what kind of vocals you're using, and how they are sung, if you sequence the Sample Rate just right you can actually come close to achieving that effect used for Cher's vocals in « Believe ». Don't forget to set your sequencer to the tempo of your song to pull this off. Also to achieve a more vocoderish feel, resample the vocals at a different pitch and play the original and the resampled one through the effect simultaneously. From there Flanging and slicing is fun.

Fuzz Brush
Ok, You want the Virtual Radio Effect.
In the parameters for V-radio, enter 12,6,0,100,0
Edit the stepmod to the following values:
Repeat 16 [1,1,2,6,22,50,68,52,32,29,17,11,7,5,1,1]
16th notes song

Now make sure and save [Shift+Enter] Once you input BPM for your song, it will match tempo and provide a fuzzy radio that can be used for percussion effect.
Alter according to your preferred deviation.

Scream Tube

This will is a nice echo screaming synth noise
On synth effect set the following parameters:
Synth Common
[off,99,-,off,0]
Synth LFO
[0,0,tri,off]
Virtual VCO
[on,saw,0,0,0,4,0,13,on,pls,42,36,16,0,0,osc1,osc1]
Virtual VCF
[80,0,0,0,0,lpf,-12,100,24,53,0,36,0,0,0,0,off,23]
Virtual VCA
[0,38,0,44,100,20,0,0,0]
Simple Dly
[alt,-,23,dotted eighth note,69,100]
Chors/Flang
[chors,inv,69,71,22,96,off]
StepMod
[1 step, 2,{0,127}, quarter note, song, 80%]
Try holding down the step mod for a few seconds, gets kinda fun when you tweak it too...

SP-808 Stomper

Use "20:Virtual analogue synthesizer." in SP-808 effects.
1. Open "step sequencer"
set the parameter.
repeat,4,1/16,song,80
"E2 rst rst rst"
2. Open "FX parameter"
set the parameter. COM:off,100,-,off,0
LFO:34,-,saw,1/16
VCO:free(useless)
VCF:0,0,100,0,0,LPF
,-24,21,100,100,0,35,0,54,8,0,ON,100
VCA:0,84,0,100,100,54,0,0,100
3. Set effect control(CTL)
nob:parameter :range
C1 :VCA Env.dpth:58-200
C2 :VCF atack :0-100
C3 :VCF decay :24-44
C4 :VCF LFO.dpth:0-22
C5 :VCF cut off :0-100
C6 :VCF Env.dpth:0-100
StM1:COM on NOTE
StM2:----------
4. Set effect's location "send/return"
and make step sequencer "on"
5. Touch control nobs.
If you make good kick sounds, sample it immediately!

NoizLooper
Patch: 20: Virtual Analog Synth
COM: off,64,-,on,40
LFO: 20,-,tri,o x 2
VCO: on,saw,100,41,0,12,0,7,on,saw,0,0,5,80,0,osc1,noise
VCF:
50,60,0,0,100,LPF,-24,0,100,100,13,36,30,100,20,0,on,23,0,35,0,80,0,36,0,0,0
DLY: mono,-,85,o x 1,27,50
C/F: flang,inv,-,2,54,17,1/32
Effect control
C1:VCA Env.Dp:0-100
C2:DLY TempoS:half note - o x 2
C3:DLY FX Lev:0-100
C4:C/F Reso :0-92
C5:VCF Cutoff:0-100
C6:VCF Reso :0-100
StM1 :Com on Note
StM2 :----------
Step sequencer
repeat,16,1/16,song,83%
"Rst,A0,Rst,D1,Rst,E1,Rst,G2,G1,Rst,G1,Rst,A1,Rst,A1,E2"
Here's how it works:
Use C5 to tweek "noizes" into the loop.
Use C6 to change texture of the noize.
The loop will constantly update itself depending on what you last fed it with C5.
If you need the loops to die off quicker change the DLY Feedback setting on the synth.
Experiment with different loop lengths by adjusting C2.

Knowledge Base

SP-808: Internal Memory
The SP-808 records and plays directly using a built-in Zip drive. A Zip disk can store up to:

64 Songs
64 Sample Banks
1024 Samples - 16 samples per bank
99 Preset Effect Patches
99 User Effect Patches
2000 Phrase Events per song

Note: Actual capacity will depend on the number, size and length of recorded samples.

SP-808: Sampling Time
The SP-808 records directly to a built-in Zip drive. The recording time or sampling time is shared between all tracks and samples. The capacity of a Zip100 disk is 100 MB. This equals approximately 46 minutes total record time at a 44.0 kHz mono sampling rate, and approximately 64 minutes total sampling time at a 32.0 kHz mono sampling rate.

SP-808: Effect Algorithm List

The SP-808 has a stereo effect processor built-in. These are the effect algorithms used to create the preset patches.

1. Isolator and Filter
2. Center Canceler
3. Stereo Compressor
4. Reverb and Gate
5. Tape Echo 201
6. EZ Delay
7. Delay RSS
8. Analog Delay and Chorus
9. Digital Chorus
10. 4 Button Chorus 320
11. Vintage Flanger 325
12. 2x Boss Flanger
13. Stereo Pitch Shifter
14. 80s Phaser
15. Stereo Auto Wah
16. Stereo Distortion
17. Phonograph
18. Radio Tuning
19. Lo-Fi Processor
20. Virtual Analog Synth
21. Guitar Multi (EX)
22. Vocal Multi (EX)
23. Voice Transformer (EX)
24. Mic Simulator (EX)
25. Vocoder (EX)

SP-808: Pre and Post-Fader Effect Settings

An input signal can be sent to the SP-808's built-in effects before or after it goes through each channels's fader (or the stereo balance setting). The choices are Pre-Fader or Post-Fader.

Pre-Fader: Changing the fader value or stereo balance has no effect on the signal level sent to the effects.

Post-Fader: Lowering the fader reduces the signal sent to the effects. This is also reflected by the channels' stereo balance settings.

1. Hold down SHIFT and press track's EFFECTS to call up the track setting screen.
2. Use the CURSOR ^ / v buttons to select "Fx" in the MIC/LINE menu.
3. Rotate the VALUE/TIME dial to switch between "PRE-F" and "PST-F."
4. Press PLAY to return to the basic screens.

SP-808: Setting Pitch Change Width
The D-Beam can control the pitch of a sample being played back. The range or depth of this pitch change can be adjusted. Use the following procedure set the D-Beam pitch change width:

1. Hold SHIFT and press PAD TRIG to display "D BEAM SETUP."
2. Use the CURSOR buttons to select "Pitch Width."
3. Use the VALUE dial to set the pitch change width, selecting from "NARROW," "MEDIUM," and "WIDE."
4. Press PLAY.

Note: The NARROW setting causes the D-Beam to have less of a pitch change result than a WIDE setting.

SP-808: Varying the Pitch Using the D Beam
The SP-808 can lower the playback pitch of a sample using the D-Beam sensor. This feature can add unique real-time pitch changes to a performance or recording. Use the following procedure to use the D-Beam to vary the pitch:

1. Press PITCH under the D-Beam so it is lit.
2. Press a numbered PAD to play a sample and move your other hand slowly over the D-Beam.

Note: As you move your hand closer to the sensor the pitch drops. This gives an effect resembling that of playback speed being slowed down. Pull your hand away from the sensor and the original playback speed is restored.

3. Press PITCH so it is not lit to turn off the function.

NOTE: You cannot raise the pitch with the D Beam Controller.

SP-808: Real-time Effects Knobs Options
There are two ways the Real-time Effects knobs can control the effects section - JUMP and NULL.

JUMP: The instant the Real-time Effects knob is rotated, the settings change to match the knob's position.
NULL: When the knob is turned, the setting does not change until the new value passes that of the stored value. After that "null" point is reached, the settings change to match the knob's position.
To change the settings, use the following procedure:

1. Press [SYSTEM/DISK].
2. Confirm that "Set System Param?" is selected and press [ENTER/YES].
3. Press the down cursor repeatedly to display "KnobControl."
4. Select either JUMP or NULL by rotating the VALUE/TIME dial.
5. Press [PLAY] to return to the basic screens.

SP-808: Jumping to a Song Location
The SP-808 allows you to instantly jump to any position (locator) in a song. Use the following procedure to register a locator position and jump to it:

1. Move to the song position you wish to register by either pressing the MEAS left (<<) or right (>>) buttons or rotating the VALUE/TIME dial.

2. Press one of the LOCATOR 1 -4 buttons to register the song position, or press LOCATOR 1 - 4 while holding SHIFT to register locators on 5 - 8. The button will illuminate indicating that the song position has been registered to that button.

3. To jump to that song position, simply press the illuminated locator button.

SP-808: Moving Locators
The SP-808 can fine tune registered LOCATORS down to the frame or "tick." This is a useful feature for providing precise location recall. Use the following procedure to edit or move the location of registered LOCATORS:

1. Press SONG/TRACK.
2. Use the CURSOR buttons to select "Locator."
3. Press ENTER/YES.

Note: Previously registered LOCATOR buttons [1] - [8] will be displayed in MEASURE/BEAT/TICK format.

4. Use the CURSOR buttons to highlight a LOCATOR value.
5. Use the VALUE dial to change the highlighted value.
6. Press PLAY to return to the basic screen.

SP-808: Deleting a Locator
At times, it may be necessary to clear or delete a locator. Locators can then be replaced with new values. Use the following procedure to clear or delete a locator:

1. Hold CLEAR and press the button for the locator you wish to delete.

SP-808: Metronome Level
Use the following procedure to set the Metronome level:

1. Press [SYSTEM/DISK] .
2. Use the [v] or [^] buttons to highlight "Set System Param?"
3. Press [ENTER/YES].
4. Use the [v] or [^] buttons to select "Metro.Level."
5. Rotate the VALUE/TIME dial to set the volume level (from 0 to 100.)
6. Press [PLAY] to return to the basic screen.

SP-808: Pad Response Options
The sample pads can be triggered in three different ways, Gate, Trigger and Drum. These different options work as follows:

GATE:
Press and hold the pad -> Starts playing sound.
Release pad -> Stops playing sound.

TRIGGER:
Press the pad -> Starts playing sound.
Release pad -> Keeps on playing.
Press pad again -> Stops playing.

DRUM:
Press the pad -> Starts playing sound (Stops automatically when the sample reaches the end point).

Use the following procedure to select the Pad Response:

1. Press the pad with the sample to be set up.
2. Press SAMPLE/BANK.
3. Check to make sure that "Set System Param?" is selected.
4. Press ENTER/YES and make sure that "PadPlay" is selected.
5. Use the VALUE dial to select "GATE," "TRIGGER," or "DRUM."
6. Press PLAY to return to the basic screen.

SP-808: Reversing Sample Playback
Create Reversal is a function that plays a sample from its end-point to its start-point, reversing playback. Use the following procedure to create a sample reverse playback:

1. Press SAMPLE/BANK.
2. Press CURSOR UP/DOWN to select "Create Reversal?" and press ENTER/YES.
3. Use the CURSOR buttons to highlight the "Source" Bank.
4. Use the CURSOR buttons and the VALUE dial to select a "Source" pad bank and "Source" sample.
5. Use the CURSOR buttons to highlight the "To" Bank.
6. Use the CURSOR buttons and the VALUE dial to select a "To" pad bank and "To" sample.

Note: "Source" refers to the sample that you want to reverse. "To" refers to an empty bank and pad where the reversed sample will be stored.

7. Press ENTER/YES to display "Now Working . . ."
8. When finished, press PLAY to return to the basic screens.
9. Access the bank and pad previously selected in the "To" screen to confirm the results.

SP-808: Protecting the Pad Banks 16 Samples

In order to prevent pad samples from being accidentally erased, you can add protection by turning Bank Protection on. Use the following procedure to turn Bank Protection on:

1. Press SAMPLE/BANK.
2. Press CURSOR DOWN to select "Bank Protection."
3. Press ENTER/YES to display the "TURN BANK PROTECTION" screen.
4. Use the VALUE/TIME dial to select a Pad number.
5. Use the ENTER/YES button to toggle protection between OFF and ON.
6. Press PLAY to return to the basic screens.

SP-808: Changing the Display From Measures/Beats to Hours/Minutes/Seconds

The SP-808 allow you to view song data in terms of hours, minutes and seconds as well as measures and beats. Use the following procedure to change the display from measures and beats to hours and minutes and seconds:

1. Press SYSTEM/DISK once.
2. Check to make sure that "Set System Param?" is selected and press ENTER/YES.
3. Use the DOWN CURSOR button (v) to select the value next to "TimeDisp" (Time Display).
4. Rotate the VALUE/TIME dial to select "TIME CODE."
5. Press PLAY]to return to the basic screens.

SP-808: Expanding or Compressing the length of One Sample to Match That of Another

The following procedure has a typo in the manual. Steps 4 and 5 are in the wrong order in the manual. The following is the correct procedure for expanding or compressing the length of one sample to match that of another.

1. While holding SHIFT press SAMPLE TRIM under QUICK EDIT to display TIME STRETCH.
2. Press a pad or use the VALUE/TIME dial to select a TIME STRETCH SOURCE.
3. Use the CURSOR BUTTONS to select TIME STRETCH TO and press a pad or use the VALUE/TIME dial to select the pad to which the processed sample is to be written.
4. Use the CURSOR BUTTONS to select MATCH/W and specify the sample whose length is to act as reference by pressing its pad, or by rotating the VALUE/TIME dial.
5. Press [v] to select Type, and rotate the VALUE/TIME dial to go to "LENGTH.
6. Press [v] to select x1 and rotate the VALUE/TIME dial to select the proportion of reference sample length to be used. (If you want the length to be the same as that of the reference sample, select x1; if you want the length to be half that of the reference sample, select x1/2; to double the length, select x2.)
7. Press [ENTER/YES]. After a while, the processed sample is assigned to the designated destination pad.
8. Press [PLAY] to return to the basic screens.

These changes are automatically saved to the disk, even when the disk is removed, as well as in other situations (no save procedure is necessary).

SP-808: Using MIDI Machine Control

MIDI Machine Control permits a master device to control remote functions on connected slave devices. Use the following procedure to enable MMC (MIDI Machine Control) on the SP-808:

1. Press [SONG/TRACK], then press the down cursor to select "Set Song Param?"
2. Press [ENTER/YES].
3. Press the down cursor to select the "MMC Mode."
4. Rotate the VALUE/TIME dial to select from the following options.

OFF: MMC information is not exchanged.
MASTER: This sets the SP-808 as the MMC master.
SLAVE: This sets the SP-808 as the MMC slave.

5. Press [PLAY] to return to the basic screens.
6. To save the settings, hold down [SHIFT] and press [ENTER/YES] to call up the Save screen and press [ENTER/YES] to save the song.

SP-808: Switching the MIDI OUT/THRU Connector

On the SP-808, MIDI OUT and MIDI THRU are combined into one connector. Although this connector is set at the factory to MIDI OUT, it can be changed to a THRU setting. Use the following procedure to change this setting:

1. Press SYSTEM/DISK.
2. Press CURSOR DOWN to select "Set MIDI Param?"
3. Press ENTER/YES to call up the MIDI settings screen.
4. Press CURSOR DOWN/UP to select "Out/Thru Select."
5. Rotate the VALUE/TIME dial to set either "OUT" or "THRU."
6. Press PLAY to return to the basic screen.

SP-808, SP-808EX: Updating The Operating System Using MIDI Files

The operating system of the SP-808/SP-808EX can be updated by using MIDI files supplied by Roland. Use the following procedure to update the operating system via MIDI:

1. Connect the MIDI OUT of a MIDI sequencer (computer-based, MC-50MKII, etc.) to the MIDI IN of the SP-808/SP-808EX.
2. Load the first MIDI file of the update into the sequencer.
3. Hold down the STATUS & EFFECTS buttons for Track A and then power on the SP-808/SP-808EX to display "MIDI UPDATE - Waiting MIDI . . ."
4. Send the first MIDI file from the sequencer.
5. Repeat step #4 for the remainder of the MIDI files.
6. When all the files have been sent, turn off the SP-808/SP808EX and turn it back on.

SP-808: Using the Foot Switch
The foot pedal input is a useful real-time tool. Various functions can be routed to the foot pedal so your hands can focus on other SP-808 functions.

PLAY/STOP: Start and stop playing back a song.
DAMPER: Use the pedal like a keyboard sustain pedal.
SAMPL TRIG: Play designated samples in each pad bank.
FX ON/OFF: Turning effects on and off.
PUNCH I/O: Punch in and out of record during recording.

Use the following procedure to select Foot Switch functions:

1. Press SYSTEM/DISK.
2. Check to make sure that "Set System Param?" is selected and press ENTER/YES.
3. Use the CURSOR UP/DOWN buttons to select "FSW Func" (Foot Switch Function).
4. Use the VALUE dial to select "PLAY/STOP," "DAMPER," "SAMPL TRIG," "FX ON/OFF," or "PUNCH I/O."
5. Press PLAY to return to the basic screens.

NOTE: These changes are automatically saved when the disk is ejected. No save procedure is necessary.

SP-808: Cleanup Disk Options
The SP-808 stores all data on the internal Zip drive. Data can remain on disk, using up valuable disk space, even if the data has been erased, cut, or truncated. Use the Cleanup Disk function to regain previously edited sampling or recording time. The Cleanup Disk function on the SP-808 has two options, "Quick" and "Standard."

Quick : Frees up recording time on the 4-track recorder that has been cut or erased, but does not free up sampling time that was truncated.

Standard : Frees up recording time on the 4-track recorder that has been cut or erased, and also frees up sampling time that was truncated.

SP-808: Saving the System to a Zip Disk
The SP-808's operating system can be transferred to a Zip disk. This is useful for backing up the current operating system for future use. Use the following procedure to backup the system to a Zip disk:

1. Hold down LOCATOR 1 and CLEAR while turning on the SP-808.
2. Make sure there is a formatted Zip disk in the internal Zip drive.
3. Press ENTER.

SP-808: Initializing - Restoring the Factory Settings

The following procedure can be used to clear the internal memory and reload the factory settings:

(CAUTION: All USER information will be lost. Be sure to back up any information you wish to keep.)

1. Press SYSTEM/DISK.
2. Press the CURSOR DOWN button to select "Init SystemParam?"
3. Press ENTER/YES to display "Initialize all System Parameters. ARE YOU SURE?"
4. Press ENTER/YES again to display "KEEP POWER ON!"

Note: The display will return to "Initialize all System Parameters. ARE YOU SURE?" when finished.

5. Press PLAY to return to the basic screen.
