# Welcome to sYbil Version 2.5

sYbil Version 2.5 is loaded with new and extremely powerful features. This manual addendum describes these new features that have been added since Version 2.0 and how you can access them. Be sure to send us your registration card so that we can send you upgrades and additional information on future product releases.

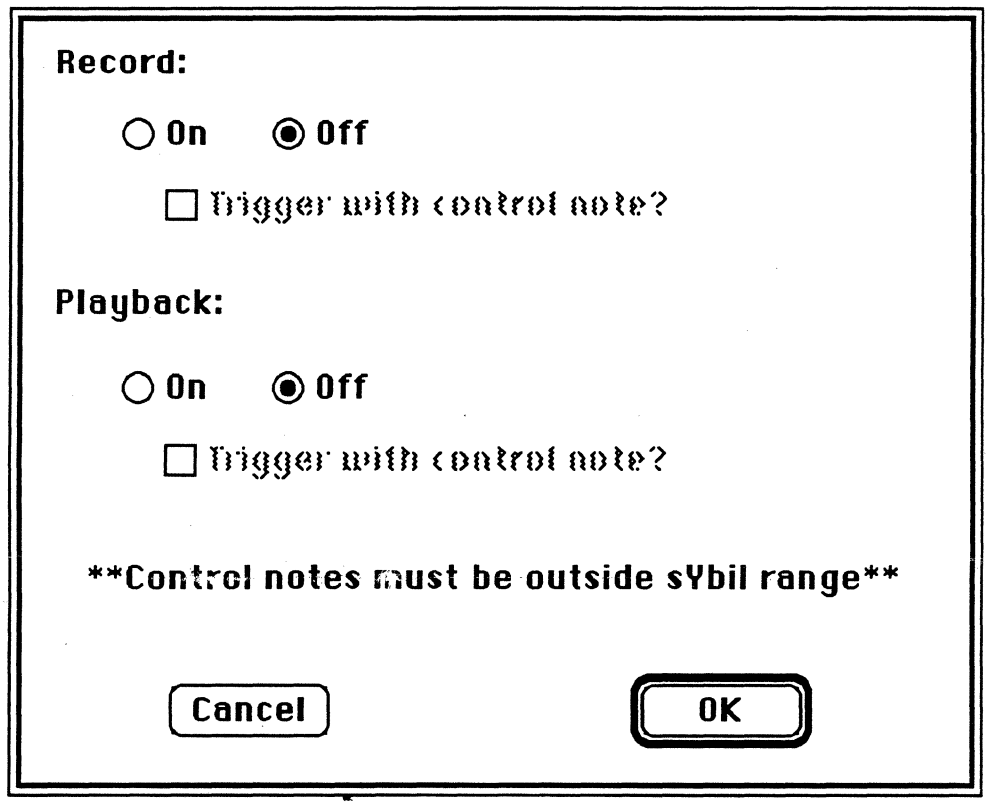
## Installation

The installation procedure for sYbil 2.5 is the same as for Version 2.0, so refer to your manual if you need information on how to install. If you are upgrading from sYbil Version 2.0, be sure to remove the old version and its folder from your hard drive before installing. Once you've installed the new version, bring up an identity map and we'll walk through the new features.

# NEW FEATURES

## Record/Playback

The most requested feature for sYbil --the ability to record and playback a performance--is now available! To access this feature, pull down the Setup menu and select the Record/Playback option. Upon selection, the following dialogue box appears:



# Record/Playback Options

## Record

To record, click the "ON" button under the "Record" heading and then click on the OK button. That's it. You will now be recording your sYbil performance. Click on the Play/Mac or Play/MIDI button (depending on whether you are using a MIDI controller or not) and play something. Click on the mouse when you have finished. You have now recorded a sYbil track.

## Playback

To hear your performance, simply pull down the Play menu and playback the recorded sYbil track by selecting the Track option. This option actually lets you see graphically on screen what keys/pads were hit.

Additionaly, you can go to the Setup menu and select record/playback again. Turn off record and set playback to ON. Click on the OK button and when you return to the pad/key screen, select play and your recorded piece will play back.

## Record/Playback Accompaniment

sYbil's record options also allow you to turn the record function on while you are performing. In this way you can capture a segment of your performance and then have the segment play back as an accompaniment loop.

To do this, select the record/playback option from the menu bar and select the record option. Next, click in the box that says "trigger with control note". Set Playback to "On" and click in the box next to the text that reads "Trigger with control note".

Like toggles, control notes let you activate both the record mode and playback modes, respectively. You can choose the control notes where they are most comfortable for you, but they must be outside the sYbil range. After you hit the Record control note, the next note you hit will be recorded as the 1st beat of the loop. Hit the Playback control note to instantaneously start playback. For example, here's what you would play to set up a C scale loop with F2 and F#2 as the respective record and play control notes:

**F2 C D E F G A B C F#2**

## Saving Your Performance

You've just given a particularly inspiring performance and you want to save what you've played. After you have captured your performance you may save it as a sYbil track.

To save a sYbil track, pull down the File menu and select the "Save Track" option. Once selected, you are prompted to name the track. You may then recall it at a later time (even during a performance) with the "Load Track" option. This allows you to use a passage from a previous performance.

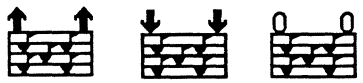
## Creating a MIDI File

sYbil 2.5 also lets you turn your performance into a standard MIDI file so that you can manipulate, edit and fine tune your piece with your favorite sequencer.

To create a MIDI file, pull down the File menu and select the "Create MIDI File" option. Now you can import the file into the sequencer program of your choice.

# New Toggles

sYbil Version 2.5 offers 6 new and very powerful toggles which will allow you to take your music to even greater heights. The six new toggles are shown below and appear with the other toggles when you hold down the shift key and click on any pad or key.



## Microtone Toggles

The microtone toggles allow you to play pitches not normally associated with the twelve tone scale. The microtone toggles are very similar to transposition toggles except the increment or decrement values let you play in between intervals. Using microtonal options, you can define as many as 64 different pitches within a single semitone.

There are three microtone toggles, one to raise the pitch, one to lower the pitch, and a reset toggle to bring you back to the original pitch.

Microtone toggles do not continue to increment or decrement. Instead, they loop through your synth's pitch bend range, with up to 64 subdivisions, or cents.

## Microtone for Drummers

With microtone toggles, drummers can turn the simplest pad controller into an incredibly monstrous drum set. By using the microtone toggle with percussion sounds, you can effectively retune your drums in real-time, providing the world's largest live set of drums, not to mention some unbelievable licks. For example, by selecting a tom tom sound, assigning microtone up or down to it, and setting the increment to 12, you can play a phenomenal cascading 5 tom roll. Experimentation will provide you with your own bag of tricks.

## Microtone lock

When you set the microtone increment, you can also limit the microtonal effects to a specific range of channels. This is particularly important if, for example, you only want to have the drum channel affected by the shift in pitch.

## Channel Lock Toggle

The channel lock option lets you lock or freeze specific channels so that they are unaffected by other toggles such as transposition.

Let's say, for example, that you use channel 10 for drums. Your synthesizer assigns MIDI note 34 to snare drum, 35 to bass drum, 36, to hi hat, and so on.

When you assign a snare drum to a sYbil pad, you might want that snare to stay there at all times, even if you transpose up into a different note range. If the channel isn't locked, as you transpose you'll hear snare, then bass drum, then hi hat, and so on. If you lock the channel, the snare will always remain, as will everything on the specified channel(s).

This is also effective in constructing bass lines which are locked underneath your melody.

To set the range of locked channels, go to the windows menu and select the PC Map option. Select the range of channels to be locked at the bottom of the screen. Be sure to select the upper limit first.

## The Harmonizer Toggle

The harmonizer is a great feature for those users with MIDI controllers. Let's take a look at what the harmonizer offers by pulling it down from the Set Up menu.

The harmonizer works only on non-sYbil notes, that is, MIDI thru. If you are playing a guitar with the harmonizer on and sYbil is assigned only to your high E, for example, all of your lower notes can be harmonized as follows:

From the harmonizer dialogue box, you can have sYbil harmonize on 4 separate channels and you can specify the intervals you want to hear as harmony. The harmonizer can be turned on and off with the harmonizer toggle and you can access the harmonizer options by simply clicking on the pad/key to which it has been assigned.

Note: If you want the harmonizer on when you begin a performance, be sure to set the harmonizer switch in the dialogue box to "On".

## Lock Toggle

The lock toggle freezes the current state of sYbil and prevents all other toggles from working. For example, you are playing sYbil and you transpose up an octave by whole steps. You then hit the Lock toggle key. Now when you hit transpose, you don't transpose, you hear the same pitch as before. When you hit reset, you don't reset the pads, you hear the reset pad still transposed up an octave. Only when you hit unlock do you regain the effects of the toggles.

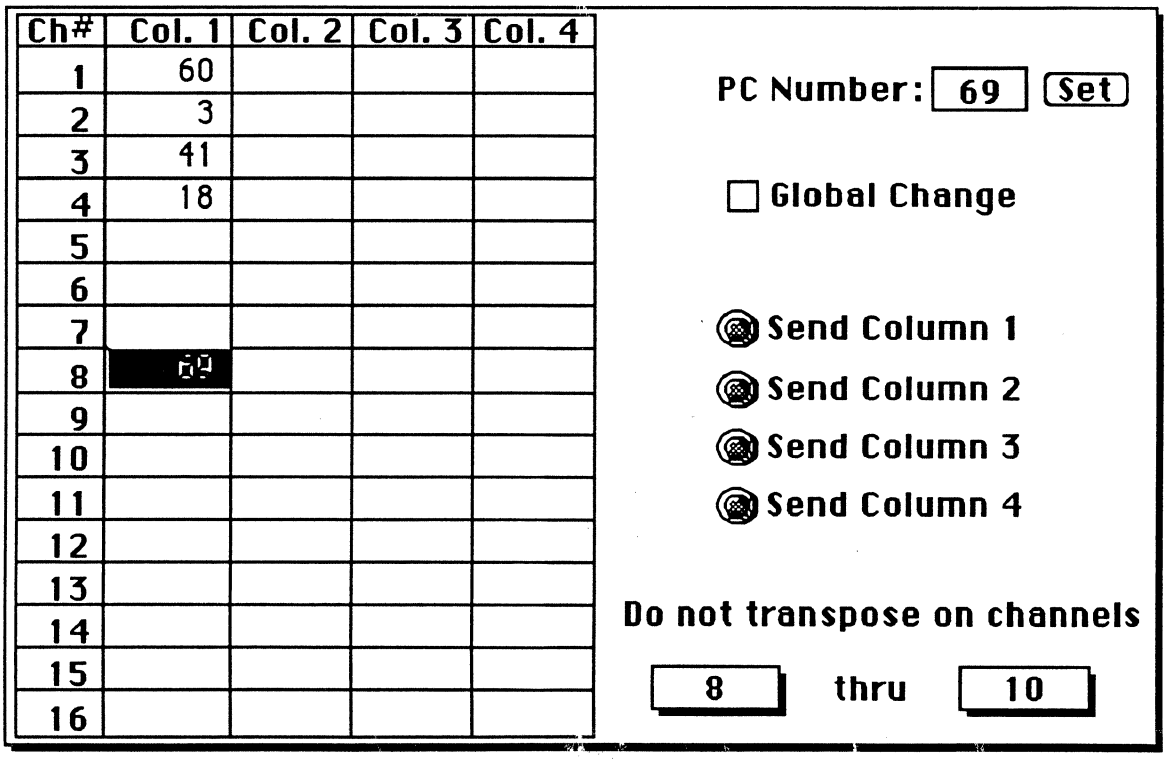
# Additional Changes

## Multiple Assignment of Toggles

The same toggle can now be used on several pads or keys simultaneously. For example, the same chain can be accesed by several notes within the same identity map.

## Channel Selective Transposition

A range of channels can be excluded from transposition by any of the increment toggles. Indicate the range of channels to be protected in the boxes in the lower right hand corner of the PC map.




## Spreadsheet/PC Map Data Entry From Controller

Notes values can now be input to the spreadsheet by simply playing them in from your MIDI controller. The note you play will appear in the currently highlighted cell. To disable this feature, simply deselect any highlighted cells by holding down the ⌘ (command) key and clicking on those cells. Similarly, program change values can be entered into the spreadsheet by sending them dirctly from your MIDI controller.

## Type-in Data Entry

Much of the data entry in V. 2.5 is done by typing numbers in directly, rather than the number lists used in V. 2.0. After you type in the necessary information, click on the SET button , shown above in the upper right corner of the PC map.

# About The Goodies Folder...

*sYbil comes with a set of identities for the Roland MT32 and the Emu Proteus. The sYbil identities are specific to these products but you can use them with other synth/sound modules if you do the following:*

**"Untitled piano solo"**
should have an acoustic [grand] piano sound assigned to all channels.

**"Drum base"**
is a jazz/ fusion identity and it should have the following channel assignments:
channel 10: drums
Channel 3: organ
Channel 2: electric bass

**"JB base"**
is a rhythm & blues/funk identity which should have the following channel assignments:

Channel 2: Slap bass
Channel 3: Trumpet
Channel 4: Electric piano
Channel 5:Organ
Channel 10: drums

***Additional identities will be available soon and others are appearing on different electronic bulletin boards. If you come up with a good identity, feel free to upload it or send it along to us. We love hearing new musical ideas from sYbilists and we'd be happy to pass them along to others!***

## The Software Instrument

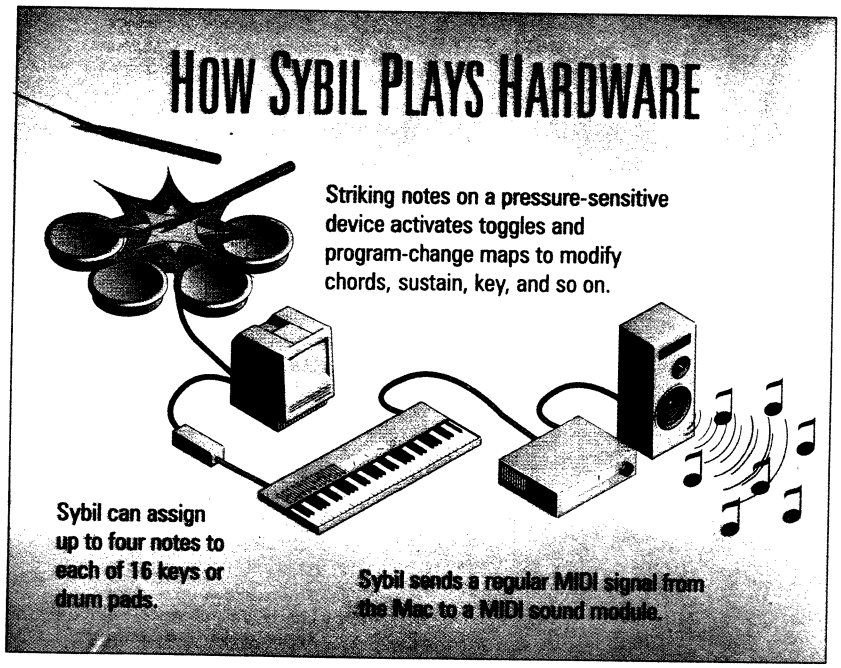
As a musician takes the stage and begins hammering with a pair of drumsticks on a small set of circular pads, the room fills with intricate rhythms, soon joined by a string section and a series of blazing solos—first guitar, then piano, then flute.

Behind the musician is an inexpensive piece of electronic music equipment and a Mac running a program called Sybil. Sybil is not a MIDI sequencer—one of those programs that works like a multitrack tape deck for recording arrangements one track at time. Sybil works like a musical instrument, allowing you to produce complex, multipart compositions on the fly. In short, you don't use Sybil, you play it.

Sybil lets you play back series of notes and chords that you assign to the pads on a MIDI drum controller, the keys on a MIDI music keyboard, the frets on a MIDI guitar, or even the keys on the Mac's keyboard. For example, you can assign a chord to a pad and play back that chord by striking the pad, or set up Sybil to play one set of notes when you strike a pad gently and another set when you strike it hard.

You can also tell Sybil to play your stored notes differently when you strike a particular pad twice in succession, first playing a chord, then transposing the chord to a different key. By combining stored notes with these toggles, as they're called, you can create remarkably rich compositions with surprisingly little effort.

Sybil 1.0 required HyperCard, but version 2.0, now shipping, is a standalone program. It retails for $299 and requires a Mac Plus with a MIDI interface and a MIDI instrument. A demonstration video is available for $10, and demonstration disks are in the works. For more information, call Scorpion Systems in San Francisco, at 415/864-2956.—**Jim Heid**



# Five Minutes to MIDI

What is MIDI *really*? For one thing, MIDI is a great tool for performing musicians. But for the uninitiated (and even the initiated!), MIDI can seem pretty intimidating. Terms like "SYSEX", "song position pointer" and "active sensing" are all part of MIDIspeak and although the terminology may be important for engineers and/or the technically inclined, it often acts as an obstacle to the rest of us who just want to make music.

If you're a performing musician and not particularly interested in learning all the technical ins and outs of MIDI, don't worry. It's easiest to think of MIDI as you do the alternating current (AC) you get from your wall outlet; AC lets you do a ton of stuff but you don't need to learn all the theoretical or technical aspects of it to take advantage of it. You just need to know how to plug various appliances into wall plugs plus a few basic rules.

The same goes for MIDI. As a musician, you want to focus on making music without having to bury yourself in the technical aspects of MIDI. The truth is, you can do that pretty easily if you just learn a few basic things.

With that in mind, let's define a few key terms which will take a lot of the mystery out of MIDI. In turn, you will be able to use MIDI (and sYbil) for what they were intended: expanding your musical horizons *and playing some great music!*

# *Some Definitions...*

## MIDI

MIDI is just a way of quantifying music numerically. That is, MIDI is a translation of your music into a string of numbers that computers and synthesizers can understand. For example, notes are numbered 0 to 127 with middle C equal to 60, C# equal to 61, D equal to 62, and so on. These numbers represent the same notes whether you play the notes on a MIDI keyboard, a MIDI guitar, or some other controller. There are a number of characteristics of your music that MIDI can describe, like the velocity of attack with which you play the notes.

The MIDI port or plug on the back of your synthesizer or other MIDI device is the place from which the MIDI information is sent or received. Some computers may need a **MIDI interface** which is a translator so that the computer can understand the MIDI information.

## MIDI synthesizer/sound module

A MIDI synthesizer is a keyboard that understands MIDI data. To be MIDI'd, the synth has at least one outlet on the back that allows it to receive MIDI information (MIDI IN) and another that allows it to send MIDI information (MIDI OUT).

**Sound modules** are keyboardless versions of synthesizers. Because modules don't include keyboards (and other hardware options) they are usually much smaller (and cheaper) than their synthesizer counterparts.

Synthesizers and sound modules typically come with a set of sounds, sometimes called **patches**, which can usually be "edited" and changed based on your personal likes and dislikes.

Editing sounds on a synthesizer is like developing a good sound on an acoustic instrument. Different synthesizer models and sound modules can have very distinct sound qualities and capabilities which can be shaped or edited by the musician.

# Controller

A controller is typically just an instrument with MIDI capabilities. For example, a **pad controller** is a drum pad that sends out MIDI information. A **keyboard controller** is a keyboard (or synthesizer) that sends out MIDI information. A **guitar controller** is a guitar or guitar-like instrument that sends out MIDI information when you play it.

## Example

On stage, you may see a horn player playing something that looks like a cross between a soprano saxophone and a can of insect repellent. When the horn player plays, though, you might hear the sound of an acoustic guitar, an organ or some other instrument.

The horn player is playing a **MIDI wind controller** and using it to control or **trigger** a synthesizer or sound module.

# MIDI Channels

MIDI allows you to play your music on 16 different channels. For now, consider this like an extended version of your home stereo which has two channels on which to transmit music. MIDI gives you 16 channels to transmit music and each channel can represent a different sound or instrument.

With sixteen independent channels, a synthesizer can conceivably play 16 different sounds at one time. When a synthesizer or sound module is described as **multi-timbral**, (a hardware requirement for sYbil to be effective) it indicates that the synthesizer or sound module is capable of playing multiple sounds at one time.

Let's look at a couple of examples to see how channels can be used for different effects.

## Example

Let's say that your multi timbral synthesizer is set up so that there's a flute on Channel 1, a bassoon on channel 2, and a cello on channel 3.

If you play a C on channel one, an E on channel 2 and a G on channel three, you'll here a C major triad played by flute, bassoon, and cello. (flute is C, bassoon is E, cello is G).

## Example

Using the same synthesizer setup, when you play the C on channel one, the E on channel one, and the G on channel one, the chord will *only* be played with the flute sound.

# Program Change

When you buy a synthesizer or a sound module, it comes with a set or "library" of different sounds. These sounds are numbered so that you can keep track of and reference them more easily. Each of these numbers is also referred to as a **program change**. When you send the synth/sound module a program change, you are telling it to play your music using the particular sound corresponding to the program change.

Since there are 16 channels, you will also indicate which channel the program change should be sent on. In effect, you tell the synthesizer or sound module which instrument you want to use on a particular channel. Any music on that channel is played using that sound.

Like the indexes in two different books, program changes are often completely different from synthesizer to synthesizer. For example, program change 9 on synthesizer X may be a zither and on synthesizer Y program change 9 may be a kettle drum. Each synthesizer includes a chart or list of which instruments or sounds are associated with each number (and many allow you to to reassign the numbers yourself). To use your synthesizer/sound module and sYbil most effectively, you should get familiar with program changes.

## Example

Let's use the same synthesizer set up from Example 1. The manual for this synthesizer includes the following program changes (we'll talk about how to actually send them later on):

12. Choir
23. trumpet
51. glockenspiel

Before you play the C major triad, you send program change 51 on channel 1, program change 23 on channel 2 and program change 12 on channel 3. When we play C on channel 1, E on channel 2 and G on channel 3, we will hear it played on glockenspiel (C), trumpet (E) and choir (G).

**NOTE:** If you don't send a program change for a channel but you still play music on that channel, the synthesizer sound module will use the default sound or the last sound assigned to that channel.

## Example

Now let's play the same C triad, but before playing it, send program change 23 on channel 1 and channel 2. Now you have changed the instrument on channel 1 and 2 and when you play the chord, C and E will be sound like a trumpet and the G will still sound like a choir.

# Gate Time

Gate times are of particular importance for drummers using MIDI (and sYbil). You can think of the gate time as the length of time that a keyboardist holds down a key on a keyboard.

Drummers hit pads and the length of time the stick makes contact on the pad is very short (and uniformly the same length), Specifying a gate time lets you indicate that the note should last longer than the fraction of a second (of impact). When a gate time is long the the note rings for a long time after impact. If a gate time is short, the note may sound staccato.

Some notes naturally decay or fade quickly, regardless of how long the gate time is. Percussive instruments such as drums, piano and xylophone, decay very quickly (they have little natural sustain). Other sounds may take a while to build, swelling or increasing in volume as time passes.

# Velocity

Velocity is a measure of your attack. The faster you hit a pad, key, or fret, the louder it will be. A velocity sensitive keyboard is one that recognizes your attack and provides you with a n associated dynamic range. If you play lightly, the music come out quieter. If you play with a lot of force, the music is louder. The scale of intensity available with MIDI is 0 to 127 where zero is no velocity and 127 is the maximum velocity.

sYbil and MIDI allow you to work with something called **velocity cross switching.** With cross switching, different characteristics of the music can change based on how hard or soft you play.The cross switch lets you set an attack threshold so that different musical events may occur based on playing harder or softer.

## Example

You play a ballad in which you like to use an organ sound. You know that when the song gets more intense you play harder (with more force). When the music gets more intense, you want to hear an electric bass accompanying the organ. So, you assign a **cross switch** that layers two different instruments (on two different MIDI channels). With cross switching, different characteristics of the music can change based on how hard or soft you play. That way, when you play really hard, the music changes in another way.

# sYbil walk thru #1

**for guitarists, keyboardists and horn players**

## Performance Notes

## "Pockets"

This identity is set up for a funk groove reminiscent of Tower of Power, and indicates some of the possibilities sYbil allows you in terms of re-configuring your instrument. "Pockets" is relatively easy to play on guitar or wind controllers, as well as keyboards. As you become familiar with the groove, try changing toggles or adding different ones for even more possibilities.

**Range: G2 (43) to A#3 (68)**
**Input Channel: 1**

| Key | Note | Ch | Note | Ch | Note | Ch | Note | Ch | Tog 1 |
|---|---|---|---|---|---|---|---|---|---|
| G2 | G1 | 5 | C2 | 10 | A#2 | 10 | | | IncRst |
| G#2 | A#1 | 5 | | | | | | | Inc1 |
| A2 | G2 | 5 | | | | | | | Hang |
| A#2 | | | | | | | | | |
| B2 | G2 | 2 | C2 | 10 | D#3 | 10 | B4 | 3 | |
| C3 | G2 | 2 | C2 | 10 | D#3 | 10 | C5 | 3 | |
| C#3 | G2 | 2 | C2 | 10 | D#3 | 10 | D5 | 3 | |
| D3 | G2 | 5 | | | | | | | |
| D#3 | G2 | 2 | C2 | 10 | D#3 | 10 | E5 | 3 | |
| E3 | E2 | 2 | F#2 | 10 | | | | | |
| F3 | F2 | 2 | D2 | 10 | G#2 | 10 | | | |
| F#3 | G2 | 2 | C2 | 10 | D#3 | 10 | F5 | 3 | |
| G3 | | | | | | | | | |
| G#3 | | | D2 | 10 | D#3 | 10 | G5 | 3 | |
| A3 | G2 | 2 | D2 | 10 | D#3 | 10 | G5 | 3 | |
| A#3 | | | | | | | | | |

The note spreadsheet for **"Pockets"** is shown above. Start with all note volumes set at 100%. Experiment with gate times to determine what sounds best with your hardware. For this map you will probably want gate times kept short, to emulate the sound of a funk horn section. To begin, specify the increment for Inc 1 (transposition up) as "1" (1 half step).

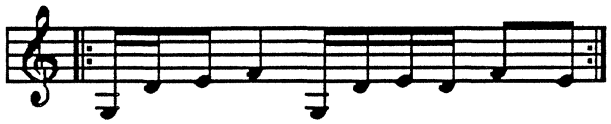
## Assigning Sounds

Sound assignments should be entered into the 1st column of the sYbil PC map. The type of sound and channel it is assigned to are listed below. The patch assignments given here are for the Roland MT-32 sound module.

Note: If you are using a different sound module, just use program changes that correspond to the appropriate sounds. For example, find the program change that corresponds to a slap bass and assign it to channel 2.

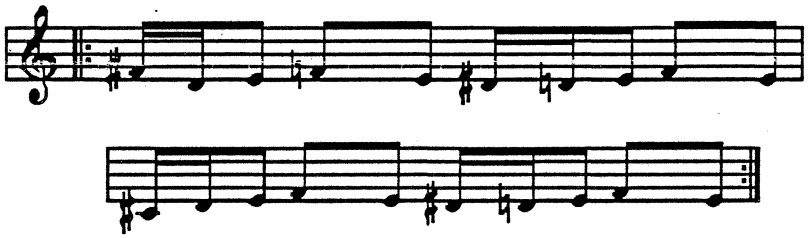
| Channel | Description | Patch No. |
|---|---|---|
| 2 | Slap Bass | 68 |
| 3 | Horn Section | 26 |
| 5 | Pop Bass | 69 |
| 10 | Percussion: | |
| | Bass drum (C2) | |
| | Snare Drum (D2) | |
| | Ride Cym (D#3) | |
| | Open HH (G#3) | |
| | Closed HH (F#3) | |

Here's an example of a basic groove you can play with the "Pockets" map:



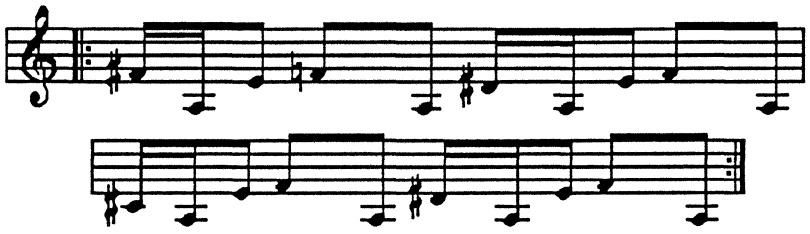
Play this pattern on your controller with sYbil activated, and you should sound like a bass player and drummer locked together in a tight groove (if not, check to see whether you have made the correct speadsheet and PC map entries). Snare drum should sound on beats 2 & 4, and the bass plays a "pop/slap" pattern throughout.

Now try the following pattern to add a horn section:



The sharp notes (F#, D#, and C#) fall on beats 1 and 3, and should sound as a short brass section peck. Be sure to assign very short gate times for the brass sounds.

The next pattern illustrates how a small change can make a big difference. The low A note has been substituted for the D note in the previous example, otherwise the examples are identical. The A note functions as a HANG toggle, so that the horn parts are sustained, rather than truncated as in the previous example.



You can also play a chromatic bass fill by simply playing 16th notes on the low G#, where the INCREMENT 1 toggle is active. Play the low G to activate the INCREMENT RESET toggle, which brings all pitches back to their original state.

# sYbil Walk-Thru #2

## For Drummers

*This example shows you one way to set up sYbil with eight MIDI pads and includes ways to quickly alter the setting.*

1. Be sure your interface is set for pads.

2. Make sure sYbil is transmitting the same MIDI notes on the same channel as your pad controller. (The pads on the screen should reflect the same MIDI note number as that sent by your controller.)

3. Set up the controller for now so that only one note is sent from each pad.

4. Open the note spread sheet by clicking on the Edit All button.

5. Change the channel setting to "2" on the right side.

6. Assign the following notes to your controller in column 1:

    1. C#4
    2. F#4
    3. C#5
    4. B4
    5. C#4
    6. C#4
    7. C#4
    8. C#4

7. Close up the spread sheet.

8. Assign the program change (PC) Toggle to pad 16 by holding down the option key and clicking on the specified pad. A pop up icon menu appears. Select the icon that looks like an old Victrola.

9. Once the toggle is assigned to the pad, click on the pad. The program change map appears.

10. Click on the cell associated with Channel 2 in column 1.

11. Look in your synth/sound module manual and locate the program change associated with a n organ. Set the PC index number to that number. The number appears in the highlighted cell.

12. Exit the program change map.

13. Click on the sustain switch in the lower left corner. Select type1 sustain.

14. Assign the increment 1 (transposition) toggle to pad 7.

15. Once assigned, click on the icon and specify a transposition interval of 2 (half steps). Click o.k.

16. Assign Decrement 2 (transpose down) to pad #6.

17. Once assigned click on the pad and specify the following chain of transposition intervals:

**5,7,-3,-5,-2,-2,7,5,6,-4,-9,-3,-4,2,2,-2**

Click the O.K. button.

18. Finally, assign the Increment reset toggle to pad #8.

19. Click on the **play** button.

# One way to play it...

Play the different notes on pads 1 through 4, hitting pad #7 to transpose on occasion. Hit pad #8 to reset the pitches. You can play a fast ascending lick by playing a single stroke roll on pad #7 (the increment pad)or alternating between pad #7 and pads 1-4.

You'll also find interesting lines by playing a roll on pad 6 and hitting pad #8 (reset) on occasion.

## You can radically change the identity by doing any of the following:

1. Change the transposition sequence associated with the Decrement 2 toggle.

2. Move the presently assigned toggles to different pads.

3. Add other toggles.

4. Open the spreadsheet and add additional notes to any pad .

5. Assign the notes on any given pad to several channels so that you get several instruments played at once.

6. change the instrument (via the PC map.)

7. Create another map and use the Velocity cross switch so that each pad can change to a completely different sound or chord based on how hard you are playing.

8. If you have drum or percussion sounds, assign some of them to the pads from the spreadsheet. You may also want to assign additional drum sounds to the cross switch setting so that when you play harder, the drums come in.