

# Nanosynth

REFERENCE MANUAL

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# YOUR SHIPPING CARTON SHOULD CONTAIN THE FOLLOWING ITEMS:

- 1 NanoSynth
- 1 AC power adapter
- 1 Rackmounting screw
- 1 Alesis warranty card
- 1 Reference Manual
- 1 Alesis NanoSynth CD-ROM

If anything is missing, please contact your dealer or Alesis immediately.

**PLEASE NOTE:** The warranty card is important. Really. Don't just throw it away. We'll be able to take better care of you now, and serve you better in the future, if you fill it out and send it in.

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# WELCOME !

“Nano” means small. Very, very small.

How small? Well, the official definition of “nano” is precisely one-billionth of whatever unit of measurement you’re referring to. So a nanosecond is one billionth of a second, while a nanometer is one-billionth of a meter – a distance so tiny that nanometers are used to measure the distance between adjacent atoms!

This does not mean, however, that a NanoSynth is one billionth of a synthesizer. Here we leave scientific accuracy behind and enter the realm of Cool Marketing Names.

Sure, the NanoSynth is *physically* small (hard to argue with calling something tiny when it only weighs a bit more than a pound, and fits in one-third of a standard rack space). But in terms of musical power, this little box is gigantic. In it you will find...

- 640 programs, 128 of which are user-programmable.
- The best General MIDI set you’ll find anywhere.
- 64 voices of polyphony.
- Multitimbral operation.
- Stereo OUTs and INs.
- Full MIDI control.
- A direct serial link for connecting with your computer.
- The same effects processor chip that Alesis uses in their top-of-the-line Q2 multieffects unit.
- A sound ROM with eight megabytes of linear, non-compressed 48kHz samples...

In short, you’ll find the equivalent of a complete QS6 keyboard, minus the keyboard, with a few little extras thrown in that make your NanoSynth an especially flexible and useful sound module. There’s something great here for you whether you’re a professional musician, a multimedia hobbyist, or anything in between. Enjoy!

Connor Freff Cochran  
June 1997

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WELCOME!

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0: WE INTERRUPT THE MANUAL IN PROGRESS FOR SOME STUFF YOU MIGHT NOT FEEL LIKE READING, BUT WHICH HAS TO BE HERE ANYWAY

**Important Safety Instructions**  
**Instructions To The User**

Many of you – no, let’s be honest, most of you – are going to skip over this section.

That’s probably okay, assuming you’ve had prior experience with audio gear and electronic instruments. This is basic stuff that you most likely already know. Feel free to leap to the next section (CONNECTIONS) and begin hooking up and playing your new NanoSynth.

Beginners, however, are strongly advised to read the **Important Safety Instructions**. A little basic knowledge is a good thing.

# Important Safety Instructions

**WARNING** – When using your NanoSynth, certain precautions should always be followed, such as:

- Read all the instructions first.
- Do not use your NanoSynth near water. Why? Water is a terrific conductor of electricity. You risk damaging your NanoSynth and shocking yourself if you use it near things like bathtubs, washbowls, and kitchen sinks, or in wet basements or around swimming pools.
- Your NanoSynth doesn't make any sound by itself – no built-in speakers – but *be careful* when you are setting the volume levels of anything you plug it into. If your amplifier, headphones, or speakers are set too loud, then you could produce sound levels capable of causing permanent hearing loss. That's "permanent" as in "forever," which is definitely not something you want. So be cautious. Don't play your NanoSynth for long periods of time at uncomfortably high volume levels. And if you ever experience any hearing loss or ringing in your ears, consult an audiologist immediately.
- Don't put your NanoSynth on or near any radiators, heat registers, or other strong heat sources.
- The "wall-wart" AC power supply for your NanoSynth should be unplugged from the outlet whenever the unit is going to go unused for a long period of time.
- Be careful that you don't drop things on, or spill liquids into, your NanoSynth. (If you have to drink something while in the vicinity of your NanoSynth, then avoid glasses and soda cans in favor of portable plastic bottles with quick-snap lids, like the kind you'd use when bicycling or at the gym.)
- If for any reason your NanoSynth is damaged, or stops working, don't try to fix it yourself. All repairs should be handled by Alesis-qualified service personnel. If the store where you bought your NanoSynth can't help, contact Alesis directly for the name and number of the authorized service location nearest you.

# Instructions To The User

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment has been verified to comply with the limits for a class B computing device, pursuant to FCC Rules. In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.



# 1 : CONNECTIONS

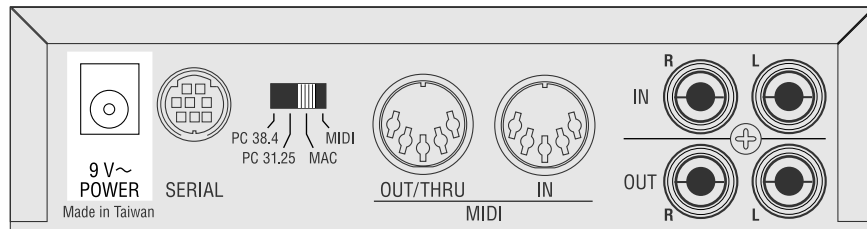
**Power**  
**Audio**  
**MIDI**  
**Direct Computer Link (the Serial Port)**  
**Rackmounting**

In this section, I'll show you how to put it all together.

**TIP:** Don't discard your NanoSynth box and packing materials. Instead, tuck them away someplace safe (they won't take up much room). In the unlikely event that you need to return your unit to your dealer or to Alesis for servicing, they'll come in handy.

# Power

Included with your NanoSynth is a “wall-wart” style power adapter which is already set for the voltage of the country your unit was shipped to. Connecting it is simple: just insert the prongs on the wall-wart end into an electrical outlet, and the single plug on the adapter end into the 9VAC~ POWER jack on the NanoSynth’s back panel.



That’s all it takes. Be aware, though, that there is no ON/OFF switch on the NanoSynth. Whenever it is plugged into an active outlet, the unit is on. (To check this, look at the POWER indicator LED on the front panel. It will glow whenever your NanoSynth is getting electricity.)

Leaving your NanoSynth on all the time won’t hurt it. You won’t use up much electricity, either, since the NanoSynth operates on a miniscule amount of power.

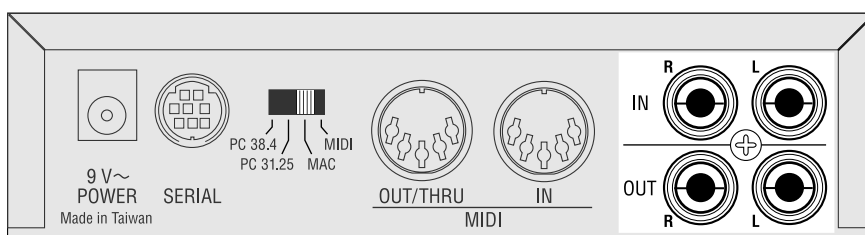
If you’d prefer to turn the unit off when you aren’t working with it, instead of leaving it on, there’s a simple solution. Plug the unit into a power strip with a built-in ON/OFF switch, and use the power strip switch to turn off the juice when required.

# Audio

There are two stereo pairs of RCA audio jacks on the back of the NanoSynth. The upper pair is marked IN and the lower pair is marked OUT. How you will set up for audio, using these jacks, depends on whether you are using your Nanosynth by itself or in combination with your computer’s soundcard.

## BY ITSELF

If you want to use your NanoSynth as a stand-alone sound module then you can ignore the IN jacks completely. Just run mono audio cables from the LEFT and RIGHT outputs to the corresponding LEFT and RIGHT input jacks on your mixer, amplifier, power amp, or powered speakers.



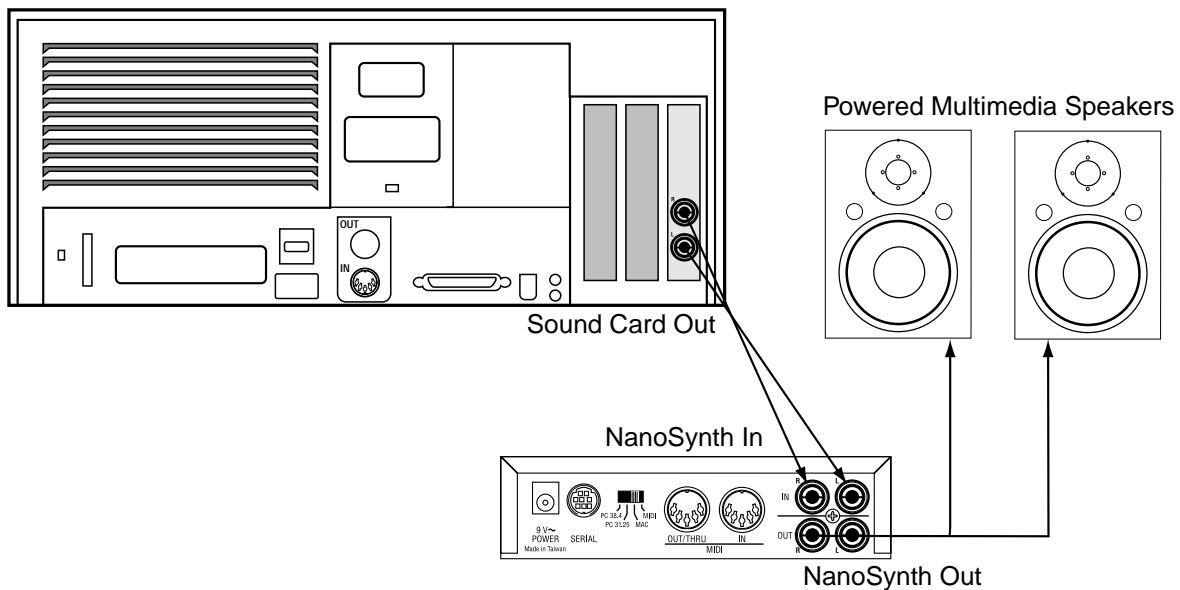


## IN COMBINATION WITH A SOUND CARD

If you want to use your NanoSynth in combination with your computer's soundcard (or some other audio source), you can. The NanoSynth will act as a "mini-mixer" to blend the two sources together. This is particularly good for multimedia applications where you want to use your computer soundcard for all digital audio and the NanoSynth for MIDI files, listening to both through the same set of powered speakers.

It's a simple setup. (1) Connect the LEFT and RIGHT outputs from your computer soundcard, or other audio source, to the NanoSynth's corresponding inputs. (2) Connect the NanoSynth's the LEFT and RIGHT outputs to the corresponding LEFT and RIGHT input jacks on your mixer, amplifier, power amp, or powered speakers.

**NOTE:** The volume knob on the front of the NanoSynth affects only the NanoSynth itself, and not the volume of whatever signal source is connected to the rear panel inputs.



In a pinch you can get by with hooking up only one of the audio outputs, but I don't recommend it. If you do that you'll be missing out on half the true-stereo sound in each program, not to mention big chunks of stereo reverb and effects. And besides — with all the money you saved buying the NanoSynth in the first place, you really ought to be able to afford some audio cables (preferably good ones).

**NOTE:** Unlike the NanoPiano and NanoBass, the NanoSynth does not automatically sum its own output signal to mono if only one jack is being used.

## AUDIO CABLE TIPS

Here are some things to avoid when working with audio cables. You experienced folks should check these out, too, instead of rushing ahead, because this is an area where you may know less than you think you do. (I can't begin to tell you how many supposedly "professional" musicians and recording engineers I've seen break the following rules, to their very real regret.)

- Do NOT bundle audio cables and AC power cords together. The field from the alternating current in the power cord will leak through even well-shielded cables, inducing noise and distortion in your audio signal.
- Do NOT run audio cables near other sources of obvious electromagnetic interference such as monitors, computers, and power transformers (including the wall-wart end of the NanoSynth's own AC adapter).
- Do NOT run audio cables where they can be stepped on or tripped over. Falling and hurting yourself is an obvious danger, of course. Less obvious is the invisible damage done to the cable itself. Every time you step on a cable you compress the insulation between center conductor and the shield, degrading performance and reducing the cable's reliability. You may not notice a problem right away, but eventually you will.
- Do NOT twist the cable if you can possibly avoid it, or force it to make sharp right angle turns. Doing these things will damage the insides of the cable even faster than stepping on them.
- NEVER unplug a cable by pulling on the cable itself. This puts a dangerous strain on the soldered connections between the cable and the plug, and can easily make a cable go bad (or at least intermittent) on you. The proper way to take a plug out of a jack is the same way you put it in — with a firm grasp on the body of the plug itself.
- ALWAYS keep your plugs and jacks clean and unoxidized. Occasional use of solvent cleaners like Tweek and Cramolin, which are available at any electronics shop, can greatly improve the electrical contact between your connectors.

# MIDI

Ten years ago MIDI was still a strange new thing to most musicians and computer users. Not any more, so I'll keep this part short.

The basics: MIDI stands for Musical Instrument Digital Interface, which is a 16-channel serial data exchange and control system for musical devices. MIDI works by supplying a way for the microprocessors in your various electronic musical devices to pass messages back and forth over a special network of cables. These cables, which are used only for MIDI data and nothing else, plug into special five-pin DIN jacks which are typically labeled IN, OUT, and THRU. The IN jack receives MIDI data. The OUT jack transmits it. And the THRU jack automatically echoes and re-transmits whatever data is being received at the IN jack (this last function has a special use I'll get to in a minute).

One of the important things to remember about MIDI is that data flow is strictly one-way. Make sure you always plug the OUT jack of one instrument into the IN jack of another, and vice-versa. The other choices – OUT to OUT, or IN to IN – won't work.

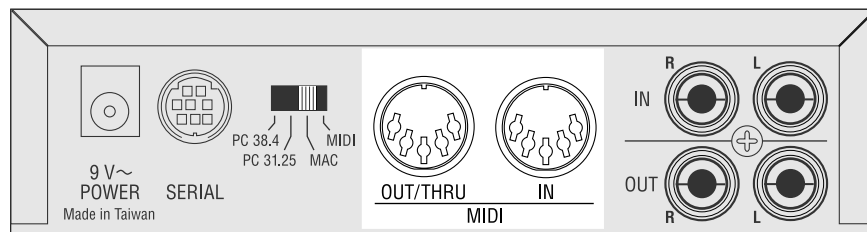
If you'll look on the back of your NanoSynth you'll see that it doesn't have an IN, an OUT, and a THRU. Instead it has an IN and a combined OUT/THRU. There are good reasons for this: (1) The NanoSynth doesn't have a built-in keyboard or anything else to play, so it doesn't really need an OUT jack. (2) Combining OUT and THRU jacks saves a little on the cost, bringing the unit's price down. (3) It makes the back panel less crowded.

**NOTE:** In order for MIDI to work, the data switch on the NanoSynth's rear panel must be set all the way over to the right (MIDI).

How should you hook your NanoSynth into your MIDI system? That depends on how you intend to use it.

## AS A SINGLE SLAVE (the IN Jack)

To play your NanoSynth directly from any MIDI source – keyboard, drum pads, woodwind controller, guitar controller, computer, etc. – just run a MIDI cable from the MIDI OUT of the controlling device to the MIDI IN jack on the back of the NanoSynth.



Because the NanoSynth was designed to be a multitimbral module, it responds to data on all 16 MIDI channels, not just one. For a fuller explanation of this design, and how best to work with it, see

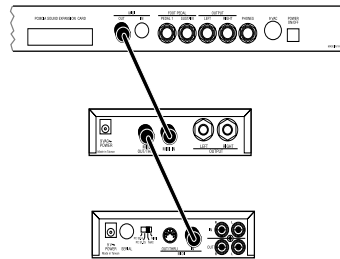
“Getting To All 640 Programs” in Section 3, GET TO KNOW YOUR NANO, and “The Not-So Basics” in Section 4, MIDI RULES.

To make sure the NanoSynth is receiving data, play the controlling instrument while watching the MIDI indicator LED on the NanoSynth’s front panel. If everything is set properly, the LED should light up. If you don’t see the light, double-check your cable connections and MIDI channel settings.

## AS PART OF A DAISY-CHAIN (the OUT Jack, Part 1)

When you want to control several MIDI devices at the same time, there are two ways to do it. The first is to buy a MIDI interface with multiple OUTs, and then run separate MIDI cables from this interface to all the different devices. This is called a “star” network and it is the preferable way to go, if you can afford it.

The second way is to “daisy-chain” several units together.



A daisy-chain is where the OUT/THRU jack on the NanoSynth comes into use. After connecting the controller’s OUT to the NanoSynth’s IN, you’d continue the chain by running a MIDI cable from the NanoSynth’s OUT/THRU to the next instrument’s IN jack, then another cable from that instrument’s THRU to the next instrument’s IN, and so on down the line until you were finished. Now when you play your controller, each device will respond to the MIDI data and “pass it on down” the line.

For reasons which will become clear just a little later in this section, a daisy chain is definitely the way to go if you are using more than one NanoSynth in combination.

**PLEASE NOTE:** As a general rule of thumb, daisy chains should be no longer than three instruments in a row. Any more than that and you risk accumulating data transmission errors that could cause stuck notes, unexpected program changes, and inaccurate control.

In really big MIDI setups, you might find yourself combining a basic star network with selected short daisy-chains, usually of instruments which you either can’t (or don’t want to) edit with your computer. Which brings us to...

## COMPUTER EDITING (The OUT Jack, Pt. 2)

127 of the 128 programs in the NanoSynth's User Bank are stored in battery-backed memory, which means that you can use a commercial librarian/editor program (such as Mark of the Unicorn's Unisyn) to customize what's in your NanoSynth. There's a ton of possibilities. You can tweak the factory programs — changing the samples in a program, picking new LFO waveforms, adjusting attack envelopes, radically altering effects settings, and so forth — or create whole new programs from scratch., or just buy a huge library of cool, effective programs for downloading.

To make this work, however, the MIDI link between your NanoSynth and your computer will have to be two-way. This means connecting the MIDI OUT from your computer interface to the MIDI IN of your NanoSynth, and the MIDI OUT of your NanoSynth back to a MIDI IN on your interface.

**NOTE:** Any program created for Alesis's popular QS6 synthesizer will run in the NanoSynth. This is part of the benefit of using the same sound ROM for both instruments. Please be aware, however, that while the NanoSynth is multitimbral, meaning it can play more than one program at a time, it can't provide each program with a separate effect. Whatever program is set to play over MIDI channel 1 will determine the NanoSynth's effect setting, which any programs being played over other MIDI channels will share. So if you want to use a QS6 patch that has a particularly cool effect setting in your NanoSynth, make sure you set your NanoSynth to play that program on MIDI channel 1.

## USING A NANOSYNTH WITH OTHER MIDI DEVICES

Hamlet didn't say it, but I will: "To isolate or not to isolate, that is the question..."

As a single unit connected to a MIDI OUT, without anything else in the chain, your NanoSynth is an easy unit to control. There's nothing to think about: Send it data on any of the 16 available MIDI channels and it will respond.

But if you chain your NanoSynth together with anything else, then you need to be aware of the fact that every command you send to the NanoSynth is going to reach every unit in the chain. Here's an example. If you send out a program change on channel 12, for example, then *every* device in the chain that is receiving on channel 12 will switch to the specified program.

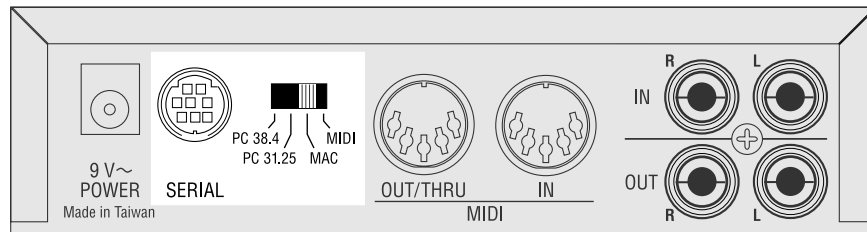
This isn't a problem if that's the effect you want to get (such as deliberately stacked-up synth sounds, or synth sounds and effects programs that are set up to switch together). But if it that effect isn't what you want, you're going to have to use a multi-port MIDI interface to keep your devices on separate MIDI lines.

## Direct Computer Link (The Serial Port)



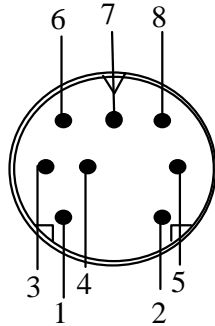
Your NanoSynth can also be controlled directly by your Macintosh or PC computer, using a serial link and special Alesis serial driver software. This software and all necessary setup instructions can be found on the special Alesis CD-ROM that came with your NanoSynth.

In terms of physical connections, just (1) connect the serial port on the NanoSynth to the serial port on your computer, using the correct serial cable for your computer; and (2) set the data switch on the NanoSynth's rear panel to either MAC or PC 38.4, depending on whether you have a Macintosh or a PC. (A very few PCs will require the PC 31.25 setting, but those situations are rare. Try 38.4 first and only switch over if it isn't working.)



**NOTE:** For historical reasons too lengthy to go into here, serial cable wiring is one of those things which isn't as standardized as non-technical users might like. Some cables are wired straight through, with pin 1 at one end of the cable connecting to pin 1 at the other end, pin 2 to pin 2, and so forth. Others "cross-wire" the pins in various ways. Obviously, using the wrong cable means that direct serial connection won't work, since the signal won't be getting through. Where to get the right cable? You can either buy one direct from Alesis at a reasonable price, or go to your local electronics/computer goodies store and buy a cable with the correct cross-wiring. The following diagram will tell you what to look for.

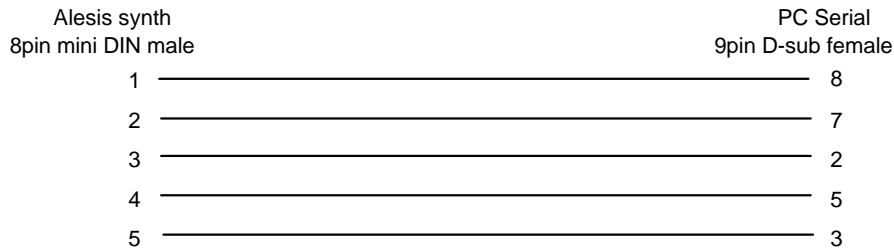
# Alesis Serial Port wiring diagram



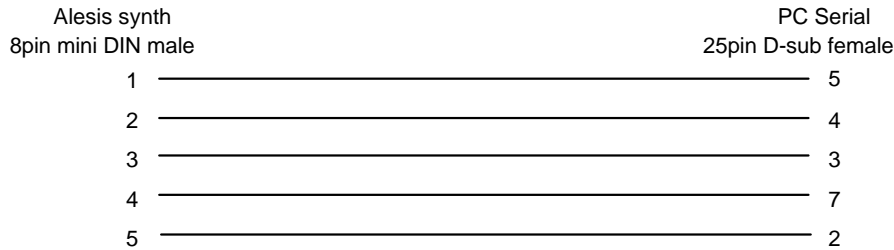
8 pin - mini DIN male plug

This plug connects to the serial port on the Alesis synth

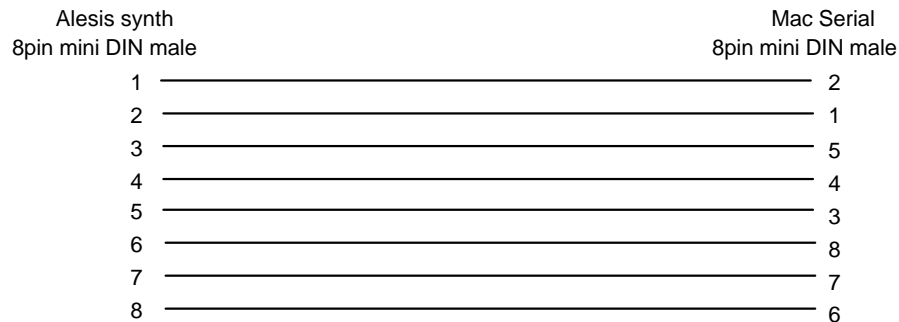
## wiring for PC serial 9pin D-sub



## wiring for PC serial 25pin D-sub



## wiring for Mac serial port



# Rackmounting

Your NanoSynth will sit happily on any flat surface, and thanks to its four rubber feet it won't slide around too much. But if you are interested in a more secure and permanent installation, then rackmounting is the way to go.

On the underside of your unit you will find a mounting nut already built into the box. This nut is positioned so it will line up with the hole in most standard rack-mount adapters for one-third-rack sized products. Simply place the NanoSynth on the adapter tray, line up the mounting nut with the hole in the adapter, and screw the unit into place using the mounting screw that came with your NanoSynth at purchase.

Your local music store can certainly supply you with an adapter that will work to mount your NanoSynth into a rack. Ask for a single-space rack shelf, rack tray, or universal rack adapter, and make sure it has pre-drilled holes in the bottom that match up with the NanoSynth's mounting nut.

## 2 : INSTANT FUN

**Demo Sequence**  
**Playing It Yourself**  
**Hint: Getting To ALL The Programs**

Once you're set up, this section will show you the two quickest ways to explore the programs in your NanoSynth.

# Demo Sequence

Built into your NanoSynth is a musical demo written and played by Herb Jimmerson. No single demo could show off all 640 programs in the NanoSynth, but Herb's "movie score" music makes a good start.

To run the demo:

- Make sure your audio is hooked up and the power on.
- Set the CHANNEL, CATEGORY, and PROGRAM knobs straight up, to the "twelve o'clock" position.
- Set the EFFECTS knob all the way counter-clockwise. Then...
- Turn EFFECTS all the way to the right in one quick turn.

At this point the MIDI indicator LED will turn on, and you will hear the Herb's piece begin to play. (The reason the indicator light is flashing is because the demo is playing from MIDI data stored in the NanoSynth ROM.)

To shut the demo off, either turn the EFFECTS knob all the way to the left again in one quick turn, or turn the unit's power off.

# Playing It Yourself

That's what you bought it for, isn't it?

Go right ahead, then. Double-check all the necessary connections — power, audio, MIDI — and start playing! When you get tired of a particular program, just use the CATEGORY and PROGRAM knobs to shift to something new (256 of the unit's 640 programs are available from the front panel).

# Getting To All 640 Programs

The NanoSynth comes with 640 programs. 256 of these (including the 127 that are user-programmable, and the special “blank” program) can be called up from the front panel. The other 384 can only be called up via MIDI or serial link.

Here’s how it works.

## FROM THE FRONT PANEL (GENERAL MIDI & USER BANKS)

The 256 programs available from the front panel consist of two 128-program banks: General MIDI and User.

Because General MIDI specifies sounds in groups of 8, we’ve arranged things as follows. For each of the 16 positions on the CATEGORY knob, positions 1-8 on the PROGRAM knob are programs from the General MIDI Bank, while positions 9-16 are programs from the User Bank.

In other words, only the PROGRAM knob determines which of the two available Banks you are in, while the CATEGORY knob is used to select what grouping of 16 programs (eight from each bank) is immediately accessible.

**NOTE:** If you are using either a NanoBass or a NanoPiano alongside your NanoSynth, be aware that front panel program selection works differently on those units. Because they are not General MIDI, it wasn’t necessary to split banks across the 16 choices on the PROGRAM knob. Instead, banks are split across the CATEGORY knob. Each position of that knob represents 16 related programs in the same bank, so that all of Bank 0 is represented by CATEGORY positions 1-8, and all of Bank 1 is represented by CATEGORY positions 9-16.

## VIA MIDI OR SERIAL LINK (SAME + BANKS 1, 2, AND 3)

The best way to have complete control over your NanoSynth, of course, is to ignore the CHANNEL, CATEGORY, and PROGRAM knobs entirely, and run everything using Bank Select and Program Change commands. That way you can access any of the unit’s 640 programs, on any channel, at any time, without undue muss, fuss, or bother.

There are three different ways to do this.

- 1) Always send a Bank Select command and then a Program Change command, in sequence. This guarantees that you will always get the exact program you want, so it’s probably a good habit to get into.
- 2) Send only a Program Change command. This will change the current program without changing the bank you are in. (For example, if you are in Bank 0, Program 33, and send a Program Change 76 command, your NanoSynth will play Bank 0, Program 76.)

3) Send only a Bank Select command. This will change the current bank *and* the current program — but it will be whatever program in the new bank has the same MIDI program number as the old one. (For example, if you are in Bank 0, Program 33, and send a Bank Select 1 command, your NanoSynth will play Bank 1, Program 33.)

## MIXING FRONT PANEL AND MIDI/SERIAL OPERATION

The rule to remember is a straightforward one: Whatever you *just did* is what counts.

Here's are two examples which should make this principle clear.

- Using your computer, you send your NanoSynth commands which activate Bank 2, Program on MIDI channel 5. So that's what plays on that channel, even if the front panel is set differently.
- If you now turn either the CATEGORY or the PROGRAM knobs, your NanoSynth will instantly change to match the Bank, Program, and MIDI selections shown on the front panel. Partial changes aren't possible — you can't call up a program in Banks 2, 3, or 4, and then use the front panel controls to move around in those banks. Move the knobs at all, and you'll be back in either the General MIDI or User banks.

## 3 : GET TO KNOW YOUR NANO

**The Specs**

**The Front**

**The Back**

**The Programs**

**The ROM Sounds**

In this section I'll quickly step you through the basic features, specs, and controls of the NanoSynth. You'll also find a reference section listing all 462 sounds in the on-board ROM and all 640 programs (with room to take some notes of your own).



# The Specs

**Sound Generation Method:** sample playback 16 bit Linear 48kHz Sample ROM

**Synthesis:** QS Composite Synthesis™

**Voices:** 64 (dynamically-allocated), each with sweepable lowpass filter, 3 envelope generators, 3 LFOs, programmable effects send and QS Modulation Matrix

**Available Waveform Memory:** 8 Megabytes

**Program Memory:** 640 presets (513 preset, 127 user)

**Effects:** QS Parallel Matrix Effects™ (4 independent stereo multieffect processing busses)

**Multitimbral Setup:** QS Mix Mode

**MIDI Connections:** MIDI In, MIDI Out/Thru

**Computer Data Connection:** Switchable Serial Port (Macintosh 1 megahertz clock, PC 31.25 kbaud, PC 38.4 kbaud)

**Audio Outputs:** Stereo Left and Right inputs, stereo Left and Right outputs

**Power Requirements:** 9 VAC, 5 Volt Amps external Transformer, UL and CSA Approved

**Dimensions:** (WxHxD) 5.5" x 1.5" x 4.5"

**Weight:** 1.25 lbs.

## What They Mean When They Say

### “64 Voices”

Once upon a time it was simple. A “voice,” in synth parlance, meant a single note of polyphony. A five voice instrument like the Sequential Circuits Prophet 5™ could play five simultaneous notes. A 16 voice instrument like the Yamaha DX7™ could play 16 notes. And so on.

Then things got complicated, when synth programmers got deep into digital design and figured out how to create even more complicated and interesting sonic textures by stacking voices together in combination. Suddenly the “number of voices = polyphony” equation didn’t directly apply anymore.

In one program on an instrument, for example, playing a single key might trigger a flute voice and a choir voice simultaneously: one note, two voices. Another program in the same instrument might stack another two voices into the mix: one note, four voices. If such an instrument had 16 voices to start with, playing just four notes would max it out.

It's important for you to understand that interaction.

The NanoSynth is a 64-voice instrument. Some of its programs trigger only one voice per note played. With those programs, you'll have 64 notes of available polyphony. Other programs trigger two voices per note, giving you 32 voices of available polyphony. Still others trigger four voices per note, allowing you 16 notes of polyphony.

And that's just for a single program. Since the NanoSynth is multitimbral and responds to all 16 MIDI channels at the same time, it's possible (though not terribly likely) that you could send assign a "4-voice-per-note" program to each of the instrument's 16 channels, then send a single note on each of those channels...and simultaneously trigger all 64 available voices, maxing out the NanoSynth's sound engine.

This all sounds more daunting than it actually is, though, thanks to another item you'll find back there in the specs: Dynamic Allocation. In simplest terms, dynamic allocation is a very slick, very smart bit of software that keeps track of what you are playing and invisibly "steals" voices that are already sounding, in order to keep up as you play.

In a well-programmed instrument, dynamic allocation is so transparent a process you'll rarely notice it happening, even in multitimbral operation. And the NanoSynth is a *very* well-programmed instrument.

## What's Special About User Bank Program 127

So what if you *don't* want your NanoSynth to respond to all 16 MIDI channels? What if you want it to merrily play along only on channel 1, or maybe just channels 1, 3, and 14?

You cheat, that's what you do.

The NanoSynth responds to all 16 channels, all the time. You can't turn any of them off. But you can get the NanoSynth to *act* as if a particular channel is off by assigning User Bank Program 127 to it. Why? Because User Bank Program 127 is blank. Empty. Void. There just isn't anything there for the incoming data to play, so if you assign User bank 127 to a particular MIDI channel you will get blissful silence on that channel until you shift to another program.

**NOTE:** This is so useful that User Bank Program 127 has been hardwired permanently into the NanoSynth. Even though it is officially in the "User" Bank, this program can't be deleted, edited, overwritten, or changed in any way. (You'll notice this if you download a whole new bank from your computer. Only programs 0-126 will change.)

# The Front

The front of the NanoSynth has two indicator LEDs and five knobs. Taking them from left to right...

**POWER:** This indicator will glow whenever the NanoSynth is hooked up to a live electrical outlet.

**MIDI:** This indicator will flash whenever the NanoSynth is receiving MIDI data. (You'll notice that it lights up when the unit is playing its onboard demo sequence. That's because the demo is stored in memory as MIDI data, and .)

**VOLUME:** This knob controls the stereo output volume for the instrument. All the way to the left is off. All the way to the right is full on. For maximum audio quality I recommend turning the volume knob to full on, and lowering the NanoSynth's signal to proper levels at your mixer or amp input. This control affects only the NanoSynth's output. It doesn't alter the output level of any signals coming in through the NanoSynth's rear panel input jacks. (Unlike the EFFECT, CATEGORY, and PROGRAM knobs, the VOLUME knob does not control each channel independently. It controls the volume of the entire unit. To adjust volume on a per-channel basis, use MIDI Continuous Controller #7.)

**EFFECT:** Although many NanoSynth programs have more than one effect built into them, each program has one *specific* effect that can be adjusted in real time from this knob. Turning it all the way to the left lowers the specified effect to nothing, while turning it all the way to the right takes the effect to its maximum programmed level. (The other effects in any given program are also adjustable, but only via MIDI.)

**CHANNEL:** Since the NanoSynth is fully multitimbral and responds on all 16 MIDI channels, this knob does *not* select which channel the unit will respond to. What it does, instead, is select which channel to assign a program to when working from the front panel (program selection itself is done by turning the CATEGORY and PROGRAM knobs). Just spinning this dial doesn't automatically alter anything — a good thing, since otherwise you couldn't set a program and make it stick. To actually assign programs is a two-step process. (1) Select a MIDI channel. (2) Set a new program for that channel using either the CATEGORY knob, the PROGRAM knob, or both. When you move on, using the MIDI knob, the last selected program for the previous channel is saved in battery-backed memory.

**CATEGORY:** This knob has no printed name on the front panel — there wasn't room — but its function should be rapidly apparent once you start playing around with it. The 256 programs in the NanoSynth that are available from the front panel are organized in two banks, General MIDI and User, and each of these banks is sub-organized in 16 categories of 8 programs each. This knob is what you use to select from among the 16 categories.

**PROGRAM:** You'll turn this one a lot (assuming you use the front panel at all). Positions 1-8 represent programs from the General MIDI bank for the currently selected category, while positions 9-16 represent the same category's programs in the User bank.

# The Back

The back of the NanoSynth has one control switch and eight connectors — one for power, one for direct computer serial link, two for MIDI, and four for audio.

**POWER:** This jack supplies electricity to the NanoSynth through the 9-volt AC adapter supplied by Alesis.

**SERIAL DATA:** This is a standard DIN-8 serial connector. If you wish to control your NanoSynth directly from your PC or Macintosh, skipping MIDI entirely, this is where you'd connect a cable running to your computer's serial port.

**DATA SWITCH:** This throw-switch determines whether the NanoSynth will respond to MIDI messages or direct serial data (and if the latter, from what kind of computer). It has four settings: PC 38.4, PC 31.25, MAC, and MIDI. People planning on using MIDI only should set this switch to MIDI and leave it there. Macintosh users wanting direct control should select MAC. PC users wanting direct control should start out with PC 38.4, and only try PC 31.25 in the (very rare) instances in which the faster setting does not work.

**MIDI OUT/THRU:** The only original MIDI messages sent out by this 5-pin DIN jack are certain responses to commands from an external source (sequencer, editor/librarian, etc.). At all other times what it does is automatically echo and re-transmit any MIDI data entering through the MIDI IN jack.

**MIDI IN:** This 5-pin DIN jack receives incoming MIDI data from external sources and controllers.

**AUDIO IN LEFT/RIGHT:** This stereo pair of RCA inputs is what you would use to connect another sound source, such as a computer soundcard's outputs, into your NanoSynth. The signal entering these inputs is routed directly out the rear panel output jacks, without processing of any kind. The main purpose of these connectors is to allow for easy setup in a multimedia environment. You can plug your soundcard into your NanoSynth, then plug your NanoSynth into your computer's powered speakers, and hear both the NanoSynth and your soundcard without any further need for connectors, adapters, or submixing.

**AUDIO OUT LEFT/RIGHT:** This stereo pair of RCA jacks serves as the output connectors for the NanoSynth itself, mixed with whatever signal is entering through the rear panel input jacks. (The volume knob on the front panel affects only the NanoSynth's portion of this combined signal.)

# The Programs

On the following pages you will find reference charts for all 640 NanoSynth programs, organized by category. The chart shows the MIDI bank select command and MIDI program number for each program, its number on the front panel PROGRAM knob, and its name.

There is also a space for you to write in notes of your own regarding what you think of each sound, or any ideas you might have for using it.

## NanoSynth Program List

MIDI program Category/# (Only the GM and User bank may be selected via the front panel The associated controller 0 value is listed next to the bank)

change #

| Prog#     | GM Bank(0) | User Bank(1) | Preset 2(2)     | Preset 3(3)   | Preset 4(4)   |
|-----------|------------|--------------|-----------------|---------------|---------------|
| Piano     |            |              |                 |               |               |
| 000       | 1          | Piano 1      | 9 8va Piano     | 0 Solo Piano  | 0 ClasclGrnd  |
| 001       | 2          | Piano 2      | 10 PianoMorph   | 1 HousePiano  | 1 HyperPiano  |
| 002       | 3          | Elec Grand   | 11 Whirl Lee    | 2 Electratak  | 2 Syn Piano   |
| 003       | 4          | Honky-Tonk   | 12 Player Pno   | 3 SalloonKey  | 3 Balladeer   |
| 004       | 5          | E.Piano 1    | 13 61 Tines     | 4 Suitcase    | 4 Nice Tines  |
| 005       | 6          | E.Piano 2    | 14 Rayz Roadz   | 5 Hard Roads  | 5 Smooth EP   |
| 006       | 7          | Harpschrd    | 15 8'4'Harpsi   | 6 TrueHarpsi  | 6 Octachord   |
| 007       | 8          | Clav         | 16 Clavitude    | 7 Clavislap   | 7 ProfitClav  |
| Chromatic |            |              |                 |               |               |
| 008       | 1          | Celeste      | 9 Potsticker    | 8 ShortCeles  | 8 FairyBellz  |
| 009       | 2          | Glockenspl   | 10 AlloyGlock   | 9 Gloknspark  | 9 GlassBells  |
| 010       | 3          | Music Box    | 11 Charms       | 10 SweetBells | 10 Clear Bell |
| 011       | 4          | Vibes        | 12 Mad Vibes    | 11 Cool Vibes | 11 Vibraphone |
| 012       | 5          | Marimba      | 13 BasMarimba   | 12 MarmbaIsle | 12 Wood Sign  |
| 013       | 6          | Xylophone    | 14 Xylobrite    | 13 Woody Xylo | 13 Steelophon |
| 014       | 7          | TubularBel   | 15 ClockTower   | 14 Tubulous   | 14 Tubularis  |
| 015       | 8          | Santur       | 16 Britecimmr   | 15 HamrDulcmr | 15 Dulcioto   |
| Organ     |            |              |                 |               |               |
| 016       | 1          | Organ 1      | 9 LFO Lezly     | 16 PrcsvBlues | 16 DrawbarCtl |
| 017       | 2          | Organ 2      | 10 Survival B   | 17 Vacuum B   | 17 MW Organ   |
| 018       | 3          | Organ 3      | 11 High Life    | 18 BigBadPerc | 18 ToneWhlPrc |
| 019       | 4          | ChurchOrgn   | 12 Full Ranks   | 19 ChurchPipe | 19 BritePipes |
| 020       | 5          | Reed Organ   | 13 Gothic Org   | 20 Reed Stops | 20 DigiPump   |
| 021       | 6          | Accordian    | 14 ClrAcrdion   | 21 FrAccrdion | 21 WrmAcrdion |
| 022       | 7          | Harmonica    | 15 WhammerJmr22 | 22 PocketHarp | 22 F-harmonca |
| 023       | 8          | Bandoneon    | 16 Palermo      | 23 AhOneAnna2 | 23 DarkHrmnca |
| Guitar    |            |              |                 |               |               |
| 024       | 1          | Nylon Gtr    | 9 ClassiclAx    | 24 ThickNylon | 24 Flamenco 6 |
| 025       | 2          | Steel Gtr    | 10 SteelUrslf   | 25 DoublSteel | 25 Acous6Strg |
| 026       | 3          | Jazz Gtr     | 11 PedalSteel   | 26 PassGuitar | 26 HawaiianGt |
| 027       | 4          | Clean Gtr    | 12 818 Guitar   | 27 PulpGuitar | 27 CountryGtr |
| 028       | 5          | Mute Gtr     | 13 Chunky       | 28 Funky Mute | 28 Total Chug |
| 029       | 6          | Overdrive    | 14 Rock Drive   | 29 OvrdriveGt | 29 TurboCtrlC |
| 030       | 7          | Distortion   | 15 Feedbacker   | 30 Rock Lead  | 30 DistortdGt |
| 031       | 8          | Gt.Harmnix   | 16 DstHrmonic   | 31 ElHarmonic | 31 AcHarmonic |
| Bass      |            |              |                 |               |               |
| 032       | 1          | AcousBass    | 9 BigUpright    | 32 AcousBassV | 32 FatUpright |
| 033       | 2          | FingerBass   | 10 Sure Bass    | 33 Deep Bass  | 33 Face Bass  |
| 034       | 3          | PickedBass   | 11 Heavy Bass   | 34 Mu Bass    | 34 SharpStick |
| 035       | 4          | Fretless     | 12 No Frets!    | 35 VolumeKnob | 35 SmoothNeck |

|          |   |            |    |            |    |             |    |            |    |             |
|----------|---|------------|----|------------|----|-------------|----|------------|----|-------------|
| 036      | 5 | Slap Bass1 | 13 | Slapstick  | 36 | FlaminBass  | 36 | Popless    | 36 | Dist Bass   |
| 037      | 6 | Slap Bass2 | 14 | Slap It!   | 37 | GothamBass  | 37 | Pop'n Bass | 37 | Slappers    |
| 038      | 7 | Syn.Bass 1 | 15 | Funky Acid | 38 | Filter Wow  | 38 | LatelyBass | 38 | Dee X Bass  |
| 039      | 8 | Syn.Bass 2 | 16 | Fat Mini   | 39 | Hypno Bass  | 39 | TranceBass | 39 | PsychoBass  |
|          |   |            |    |            |    |             |    |            |    |             |
| Strings  |   |            |    |            |    |             |    |            |    |             |
| 040      | 1 | Violin     | 9  | Stradivari | 40 | DiamondVln  | 40 | Violiner   | 40 | Fusion Vln  |
| 041      | 2 | Viola      | 10 | BiViola    | 41 | Solo Viola  | 41 | C-Bs&Viola | 41 | Fusion Vla  |
| 042      | 3 | Cello      | 11 | Cello Ros  | 42 | DarkrCello  | 42 | CelloRound | 42 | Dark Cello  |
| 043      | 4 | Contrabass | 12 | FusinKntra | 43 | Bass&Cello  | 43 | Celli      | 43 | Kontrabass  |
| 044      | 5 | TremoloStr | 13 | TremEnsemb | 44 | TrembleStr  | 44 | StringAura | 44 | J Str Trem  |
| 045      | 6 | Pizzicato  | 14 | Pizzicati  | 45 | PizzViolin  | 45 | Pizz Pluck | 45 | SpacePluck  |
| 046      | 7 | Harp       | 15 | HeavenHarp | 46 | Soft Harp   | 46 | Harpitz    | 46 | Waterfalls  |
| 047      | 8 | Timpani    | 16 | TimPanic   | 47 | Big O Timp  | 47 | TrashyTimp | 47 | Strng&Timp  |
|          |   |            |    |            |    |             |    |            |    |             |
| Ensemble |   |            |    |            |    |             |    |            |    |             |
| 048      | 1 | Strings    | 9  | HugeString | 48 | ArcoStrngs  | 48 | Concerto   | 48 | OctoString  |
| 049      | 2 | Slo String | 10 | SloOctStrg | 49 | String Pad  | 49 | Slow 8s    | 49 | Orchestrar  |
| 050      | 3 | SynString1 | 11 | SE Motion  | 50 | J Strings   | 50 | AnaStrEnsm | 50 | VintageStr  |
| 051      | 4 | SynString2 | 12 | Xpando Pad | 51 | Ana String  | 51 | Syn Arcos  | 51 | Obersphere  |
| 052      | 5 | Choir Aahs | 13 | CloudChoir | 52 | Ooh LaLa    | 52 | MorphChoir | 52 | Afterglow   |
| 053      | 6 | Ooh Vox    | 14 | VelOoz&Aaz | 53 | Chiff Oohs  | 53 | Hen-Ya     | 53 | Sunsrizer   |
| 054      | 7 | Synvox     | 15 | Nice Voice | 54 | Velocivox   | 54 | Air Choir  | 54 | GlideVoxMW  |
| 055      | 8 | Orchst.Hit | 16 | Hitz Peak  | 55 | Mortal Hit  | 55 | Danz Hitz  | 55 | Deja Hitz   |
|          |   |            |    |            |    |             |    |            |    |             |
| Brass    |   |            |    |            |    |             |    |            |    |             |
| 056      | 1 | Trumpet    | 9  | UseMWandAT | 56 | TrumpetLyt  | 56 | SynTrumpet | 56 | TrumpletMW  |
| 057      | 2 | Trombone   | 10 | Bone Tone  | 57 | Solo Tromb  | 57 | Tromb Ens  | 57 | Fanfare     |
| 058      | 3 | Tuba       | 11 | Hard Tuba  | 58 | Big Tuba    | 58 | Round Tuba | 58 | ClscHorns   |
| 059      | 4 | Mute Trump | 12 | BriteMute  | 59 | Jazz Mute   | 59 | Orch Mutes | 59 | Mute&Flute  |
| 060      | 5 | FrenchHorn | 13 | FlugelSolo | 60 | FHrn Ens    | 60 | HornExpans | 60 | Documentar  |
| 061      | 6 | Brass      | 14 | EssexBrass | 61 | BrassTouch  | 61 | Stab Brass | 61 | BriteBrass  |
| 062      | 7 | Syn.Brass1 | 15 | Matrix Brs | 62 | Sfz Brass   | 62 | Mighty5ths | 62 | BeBopHorns  |
| 063      | 8 | Syn.Brass2 | 16 | El Brasso  | 63 | FiltrSynth  | 63 | Ooh Horns  | 63 | Kick Brass  |
|          |   |            |    |            |    |             |    |            |    |             |
| Reed     |   |            |    |            |    |             |    |            |    |             |
| 064      | 1 | SopranoSax | 9  | G. Soprano | 64 | Saxette     | 64 | MonoSoprno | 64 | Pastorale   |
| 065      | 2 | Alto Sax   | 10 | Sax Touch  | 65 | Spit Alto   | 65 | Alto Swing | 65 | Sexy Sax    |
| 066      | 3 | Tenor Sax  | 11 | Tenor Solo | 66 | BreathySax  | 66 | Throat Sax | 66 | Sax on Wax  |
| 067      | 4 | Bari Sax   | 12 | SaxSection | 67 | Big O Bari  | 67 | Sam's Sax  | 67 | ThoseSaxes  |
| 068      | 5 | Oboe       | 13 | Oboe Reed  | 68 | Oboe Blow   | 68 | Ebony Oboe | 68 | Wind Ensemb |
| 069      | 6 | EnglishHrn | 14 | S.Eng.Horn | 69 | London Fog  | 69 | StatelyOrc | 69 | Orchestr8   |
| 070      | 7 | Bassoon    | 15 | DrkBassoon | 70 | SoloBassoon | 70 | Fhorn&Bssn | 70 | Oddsemble   |
| 071      | 8 | Clarinet   | 16 | Clarinet O | 71 | 1stClarnet  | 71 | Dixi Brass | 71 | Cartoonin'  |
|          |   |            |    |            |    |             |    |            |    |             |
| Pipe     |   |            |    |            |    |             |    |            |    |             |
| 072      | 1 | Piccolo    | 9  | Pickle O   | 72 | Pick-a-low  | 72 | Pic-a-fife | 72 | TronFlutes  |
| 073      | 2 | Flute      | 10 | LyricFlute | 73 | MoodyFlute  | 73 | Deep Flute | 73 | ChiffFlute  |
| 074      | 3 | Recorder   | 11 | SprnoRcrdr | 74 | SftRecordr  | 74 | SingleFlut | 74 | The Bosun   |
| 075      | 4 | Pan Flute  | 12 | PanPeople  | 75 | Panz Flute  | 75 | Hard Pipes | 75 | Shamanixst  |
| 076      | 5 | BottleBlow | 13 | PlugdBottl | 76 | BottledAir  | 76 | Bottle Pad | 76 | BlowDeTune  |
| 077      | 6 | Shakuhachi | 14 | Octohachi  | 77 | Phat Pipe   | 77 | NativeFlut | 77 | FluteEnsem  |
| 078      | 7 | Whistle    | 15 | KeyWhistlr | 78 | Whistral    | 78 | Wistelaan  | 78 | Nautical    |
| 079      | 8 | Ocarina    | 16 | Rugrats    | 79 | OcariNoir   | 79 | Slippery   | 79 | PanBristle  |

|     |   |            |    |             |     |            |     |            |     |            |
|-----|---|------------|----|-------------|-----|------------|-----|------------|-----|------------|
|     |   | Synth Lead |    |             |     |            |     |            |     |            |
| 080 | 1 | SquareWave | 9  | Porta Lead  | 80  | SquareLead | 80  | RaveSqrQS6 | 80  | 3oh3 SqrMW |
| 081 | 2 | Saw Wave   | 10 | Quadratrix  | 81  | Saw Lead   | 81  | RaveSawQS6 | 81  | 3oh3 SawMW |
| 082 | 3 | Calliope   | 11 | Triangular  | 82  | SynCalliop | 82  | Syn Circus | 82  | Digidee    |
| 083 | 4 | Chiffer Ld | 12 | Rez Blastz  | 83  | Zip Lead   | 83  | Analogist  | 83  | ChiffLeads |
| 084 | 5 | Charang    | 13 | Screamer    | 84  | Boiled Gtr | 84  | Haurang    | 84  | FatAnaLead |
| 085 | 6 | Solo Voice | 14 | ShineOn...  | 85  | Solo Vocks | 85  | Voice Lead | 85  | Applewine  |
| 086 | 7 | 5th Saw    | 15 | Saw 5X      | 86  | King 5th   | 86  | Brassy 5th | 86  | I Saw 5    |
| 087 | 8 | Bass&Lead  | 16 | ClassicSqr  | 87  | Low&High   | 87  | Led Bass   | 87  | Blacksmith |
|     |   | Synth Pad  |    |             |     |            |     |            |     |            |
| 088 | 1 | Fantasia   | 9  | Bell Pad    | 88  | Marimpanad | 88  | Pluck Pad  | 88  | Gothos     |
| 089 | 2 | Warm Pad   | 10 | Atlantis    | 89  | Cool Pad   | 89  | Swell Pad  | 89  | Holla Pad  |
| 090 | 3 | Polysynth  | 11 | PolySyn     | 90  | Poly-gone  | 90  | Air Pad MW | 90  | Digiculver |
| 091 | 4 | SpaceVoice | 12 | SpaceVocks  | 91  | BrezyChoir | 91  | Voice Bell | 91  | Scarlette  |
| 092 | 5 | BowedGlass | 13 | Ice-O-tope  | 92  | Bo's Glass | 92  | Tranzcndnt | 92  | SftScience |
| 093 | 6 | Metal Pad  | 14 | Metallic    | 93  | Tal Pad    | 93  | BladeRunnr | 93  | Illusions  |
| 094 | 7 | Halo Pad   | 15 | HiloVolt    | 94  | Holo Pad   | 94  | Hilo Pad   | 94  | VoltagePad |
| 095 | 8 | Sweep Pad  | 16 | 7th Wave    | 95  | Sweep Up   | 95  | E Sweep    | 95  | Ascent     |
|     |   | Synth FX   |    |             |     |            |     |            |     |            |
| 096 | 1 | Ice Rain   | 9  | HeavenCent  | 96  | Comet Rain | 96  | Acid Rain  | 96  | Dew Drops  |
| 097 | 2 | Soundtrack | 10 | Bali Hai    | 97  | SuperScore | 97  | Legendary  | 97  | Ocean Mood |
| 098 | 3 | Crystal    | 11 | Crystallin  | 98  | Aluminum   | 98  | Strukit    | 98  | Helical    |
| 099 | 4 | Atmosphere | 12 | Tropospher  | 99  | Atmosfear  | 99  | Strafing   | 99  | PhaseArray |
| 100 | 5 | Brightness | 13 | CafeDelMar  | 100 | Brighter   | 100 | GldnFleece | 100 | Romulux    |
| 101 | 6 | Goblins    | 14 | Gobbling    | 101 | Elves      | 101 | Nitrous    | 101 | Hyperspace |
| 102 | 7 | Echo Drops | 15 | Echoes      | 102 | EffectRetn | 102 | HighGlissz | 102 | Intertwine |
| 103 | 8 | Star Theme | 16 | Moonling    | 103 | Sci-Fi     | 103 | Moon&Womb  | 103 | Spaceport  |
|     |   | Ethnic     |    |             |     |            |     |            |     |            |
| 104 | 1 | Sitar      | 9  | WorldSitar  | 104 | Sitar Buzz | 104 | Atmossitar | 104 | Raga No.1  |
| 105 | 2 | Banjo      | 10 | Ethnoba     | 105 | BanjoDual  | 105 | DownYonder | 105 | Ethnicity  |
| 106 | 3 | Shamisen   | 11 | MelloShami  | 106 | Shamijo    | 106 | Shame-isen | 106 | Toru       |
| 107 | 4 | Koto       | 12 | Amakudari   | 107 | Soft Koto  | 107 | Kotobaba   | 107 | Ethnotal   |
| 108 | 5 | Kalimba    | 13 | Kalimbex    | 108 | Kalidark   | 108 | Chasers    | 108 | Kalimpanad |
| 109 | 6 | Bagpipe    | 14 | The Moors   | 109 | Bag O'pipe | 109 | Bagboe     | 109 | Bags       |
| 110 | 7 | Fiddle     | 15 | Git Fiddle  | 110 | Violin Ace | 110 | ZizzViolin | 110 | Violin Orc |
| 111 | 8 | Shanai     | 16 | Shanaye     | 111 | Shan'sReed | 111 | Tom'sO'Man | 111 | 1001Nights |
|     |   | Drums/Perc |    |             |     |            |     |            |     |            |
| 112 | 1 | TinkleBell | 9  | D4 Pwr Kit  | 112 | Real Rock  | 112 | Ambi Rock  | 112 | Cirque     |
| 113 | 2 | Agogo      | 10 | Pop Up Kit  | 113 | Dry70'sKit | 113 | Trashy Kit | 113 | Agogo Gone |
| 114 | 3 | Steel Drum | 11 | UrbanBliss  | 114 | Hipp Kitt  | 114 | T Funk Era | 114 | SteelDrama |
| 115 | 4 | Wood Block | 12 | Straight 8  | 115 | Bomb Kit   | 115 | PiqueDrumz | 115 | WdBlockage |
| 116 | 5 | Taiko      | 13 | 9 Time      | 116 | HardcorKit | 116 | Harlem Tek | 116 | KodoDrummr |
| 117 | 6 | Melo Tom   | 14 | Techno Kit  | 117 | Club Kit   | 117 | Big Dance  | 117 | MelodicTom |
| 118 | 7 | Synth Drum | 15 | IsmellIFUNK | 118 | Old School | 118 | 15ips Kit  | 118 | WhistlDrum |
| 119 | 8 | ReverseCym | 16 | Gruvy Lube  | 119 | Destructo! | 119 | Asylum Kit | 119 | ReverseRap |
|     |   | Effects    |    |             |     |            |     |            |     |            |
| 120 | 1 | Gt.FretNze | 9  | Psyclotron  | 120 | Swamp Goop | 120 | Bonk       | 120 | Gutteral   |
| 121 | 2 | Breath Nze | 10 | UB Riddim   | 121 | Dub Lander | 121 | Go On      | 121 | ThatCoyote |



|     |   |            |    |               |     |            |     |            |     |            |
|-----|---|------------|----|---------------|-----|------------|-----|------------|-----|------------|
| 122 | 3 | Seashore   | 11 | Crenshaw      | 122 | Sweat      | 122 | Donut Shop | 122 | T I M E !  |
| 123 | 4 | Bird       | 12 | Razor Edge    | 123 | Nodes      | 123 | Abuser     | 123 | Heartbeat  |
| 124 | 5 | Telephone  | 13 | Get On        | 124 | Git Along  | 124 | Dino + Dog | 124 | Laboratory |
| 125 | 6 | Helicopter | 14 | Herkin It     | 125 | Danger Tip | 125 | Fried      | 125 | Nostromo   |
| 126 | 7 | Applause   | 15 | Caravania     | 126 | Nanites    | 126 | Insectagon | 126 | 1stContact |
| 127 | 8 | Gun Shot   | 16 | *silent prog* | 127 | Cricketry  | 127 | TseTse Fly | 127 | Final Dawn |

# The ROM Sounds

This is a list of the sample families that are built in to the NanoSynth's 8 megabytes of sound ROM. They are the "raw materials" that the programs combine, in different ways, to create the unit's 640 programs.

You will note that they are set up in two different lists. This is because the sound architecture of the NanoSynth is identical to that of the Alesis QS6 synthesizer, meaning that it can be programmed – using Mark of the Unicorn's Unisyn, or some other editor/librarian software – in either program mode or drum mode, and the ROM sounds are available in different groupings for each.

|                 |            |               |
|-----------------|------------|---------------|
| <b>Piano</b>    | GrandPiano | Percus 3rd    |
|                 | Dark Piano | Percus Wav    |
|                 | BritePiano | HollowWave    |
|                 | PianoModul | ChurchOrgn    |
|                 | NoHamrGrnd | Principale    |
|                 | NoHamrBrit | Positive      |
|                 | VelAttkPno | 60's Combo    |
|                 | VeloPiano1 |               |
|                 | VeloPiano2 | <b>Guitar</b> |
|                 | PianoKnock | SteelStrng    |
|                 | BriteRoads | NylonGuitr    |
|                 | Dark Roads | Nylon/Harm    |
|                 | Soft Roads | Nylon/Harp    |
|                 | VeloRoads1 | JazzGuitar    |
|                 | VeloRoads2 | SingleCoil    |
|                 | VeloRoads3 | Sngle/Mute    |
|                 | BrtrdsWave | DoubleCoil    |
|                 | DrkRdsWave | DCoil/Harm    |
|                 | SftRdsWave | DCoil/Jazz    |
|                 | Wurlser    | D/S Coil      |
|                 | Wurlser V1 | MicroGuitr    |
|                 | Wurlser V2 | PwrH/MGtr1    |
|                 | WurlserWav | PwrH/MGtr2    |
|                 | FM Piano   | MuteGuitar    |
|                 | FM Tines   | Mute Velo     |
|                 | Soft Tines | Metal Mute    |
|                 | VelAtkTine | MGtr/MtlMt    |
|                 | Vel FM Pno | MtlMut/Hrm    |
|                 | Clavinet   | Fuzz Wave     |
|                 | Harpsicord | ClsHarmncs    |
|                 | VAtkHarpsi | ElecHarmnc    |
|                 | HarpsiWave | Pwr Harm 1    |
|                 | Pwr Harm 2 |               |
|                 | Pwr Harm 3 |               |
|                 | PwrHrmVel1 |               |
|                 | PwrHrmVel2 |               |
|                 | PwrHrmVel3 |               |
| <b>Chromatc</b> | Glock      |               |
|                 | Xylophone  |               |
|                 | Marimba Hd |               |
|                 | Marimba Sf |               |
|                 | MarimbaVel |               |
|                 | Vibes      | <b>Bass</b>   |
|                 | Ice Block  | StudioBass    |
|                 | Brake Drum | Studio&Hrm    |
|                 | FMTblrBell | Studio/Hrm    |
|                 | FMTub/Null | Slp/Studio    |
|                 | TubulrWave | Slap Bass     |
|                 | TubWv/Null | Slap&Harm     |
| <b>Organ</b>    | FullDrwbar | Slap/Harm     |
|                 | Rock Organ | Slap/Pop      |
|                 | Perc Organ | Pop/Slap      |
|                 | 16'Drawbar | Bass Pop      |
|                 | 5 1/3' bar | Pop/Harm      |
|                 | 8' Drawbar | Harm/Pop      |
|                 | 4' Drawbar | JazzFingrd    |
|                 | 2 2/3' bar | Fingr&Harm    |
|                 | 2' Drawbar | JazzPicked    |
|                 | 1 3/5' bar | Pickd&Harm    |
|                 | 1 1/3' bar | Jazz Velo     |
|                 | 1' Drawbar | Muted Bass    |
|                 | Percus 2nd | Stik Bass     |
|                 | Stik&Harm  |               |
|                 | Stik/Harm  |               |
|                 | Fretless   |               |

|                 |             |             |             |
|-----------------|-------------|-------------|-------------|
|                 | Frtls&Harm  |             | AcidSweep3  |
|                 | AcousBass1  |             | AcidSweep4  |
|                 | AcoBs1&Hrm  |             | AcidSweep5  |
|                 | AcousBass2  |             | VeloAcid 1  |
|                 | AcoBs2&Hrm  |             | VeloAcid 2  |
|                 | VelAcoBass  |             | VeloAcid 3  |
|                 | 3-VelBass1  |             | VeloAcid 4  |
|                 | 3-VelBass2  |             | AnalogSqr1  |
|                 | 3-VelBass3  |             | AnalogSqr2  |
|                 | 3-VelBass4  |             | AnalogSqrV  |
|                 | BassHarmnc  |             | Sync Lead   |
| <b>String</b>   | StringEnsm  |             | Seq Bass    |
|                 | AttkString  |             | SeqBassVel  |
|                 | Violin      |             | Tek Bass    |
|                 | Cello       |             | FatSynBass  |
|                 | Pizz Sectn  |             | TranceBas1  |
|                 | Pizz Split  |             | TranceBas2  |
|                 | Strng/Pizz  |             | VeloTrance  |
|                 | Pizz/Strng  |             | FilterBass  |
|                 | Harp        |             | FM Bass     |
|                 |             |             | FM/FiltVel  |
| <b>Brass</b>    | Brass Ensm  | <b>Wave</b> | Pure Sine   |
|                 | Trumpet     |             | 10% Pulse   |
|                 | MuteTrumprt |             | 20% Pulse   |
|                 | Trombone    |             | 50% Pulse   |
|                 | FrenchHorn  |             | Velo Pulse  |
|                 | Bari Horn   |             | Mini Saw    |
|                 | Tuba        |             | Saw Fltr 1  |
|                 |             |             | Saw Fltr 2  |
| <b>Woodwind</b> | Bassoon     |             | Saw Fltr 3  |
|                 | Oboe        |             | Saw Fltr 4  |
|                 | EnglishHrn  |             | RezSaw UK   |
|                 | Clarinet    |             | RezSaw USA  |
|                 | Bari Sax    |             | Acid Saw    |
|                 | BrthyTenor  |             | Velo Saw1   |
|                 | Alto Sax    |             | Velo Saw2   |
|                 | SopranoSax  |             | Velo Saw3   |
|                 | Velo Sax    |             | Velo Saw4   |
|                 | Flute       |             | Velo Saw5   |
|                 | FluteWave   |             | AcidRezSqr  |
|                 | Shakuhachi  |             | VelAcidWav  |
|                 | PanPipe Hd  |             | MiniSquare  |
|                 | PanPipe Md  |             | Sqr Fltr 1  |
|                 | PanPipe Sf  |             | Sqr Fltr 2  |
|                 | PanPipeVel  |             | VeloSquare  |
|                 | Pan Wave    |             | Mini Tri    |
|                 | BottleBlow  |             | Tri Filter  |
|                 | BottleWave  |             | Velo Tri    |
|                 | Wood Chiff  |             | Rectanglar  |
| <b>Synth</b>    | J Pad       |             | Hard Sync   |
|                 | M Pad       |             | HSync/Rect  |
|                 | X Pad       |             | Additive 1  |
|                 | Velo Pad 1  |             | Additive 2  |
|                 | Velo Pad 2  |             | VeloAdditiv |
|                 | Velo Pad 3  |             | Digital 1   |
|                 | AcidSweep1  |             | Digital 2   |
|                 | AcidSweep2  |             | Digital 3   |
|                 |             |             | Digital 4   |

|               |              |                           |
|---------------|--------------|---------------------------|
|               | Science 1    | Octave Kit                |
|               | Science 2    | OrchestraKt               |
|               | Science 3    | Deep Kick                 |
|               | Science 4    | Big O Kick                |
|               | VelScience   | GarageKick                |
|               | Metal Wave   | CrunchKick                |
|               | Inharmonc1   | Rap Kick                  |
|               | Inharmonc2   | Tek Kick                  |
| <b>Noise</b>  | WhiteNoise   | AnalogKick                |
|               | Spectral 1   | GrooveKik1                |
|               | Spectral 2   | GrooveKik2                |
|               | Crickets     | Studio Snr                |
|               | Rain Noise   | Big O Snr                 |
|               | VeloNoise1   | PiccoloSnr                |
|               | VeloNoise2   | ScratchSnr                |
|               | VeloNoise3   | BrassSnare                |
|               | Noise Loop   | Rimshot                   |
|               | Bit Field    | Rap Snare1                |
|               |              | Rap Snare2                |
| <b>Voice</b>  | VocalAhhs    | Tek Snare                 |
|               | Soft Ahhs    | BrushSnare                |
|               | Ahhs Wave    | Sidestick                 |
|               | VocalOohs    | Rack Tom                  |
|               | Soft Oohs    | Floor Tom                 |
|               | Oohs/Ahhs    | Cannon Tom                |
|               | Ahhs/Oohs    | Rap Tom                   |
|               | Whistle      | Hex Tom                   |
|               |              | Closed Hat                |
| <b>Ethnic</b> | Sitar        | Open Hat                  |
|               | Sitar Wave   | FootClosed                |
|               | Shamisen     | RapClsdHat                |
|               | Koto         | RapOpenHat                |
|               | DulcimerHd   | TekClsdHat                |
|               | DulcimerMd   | TekOpenHat                |
|               | DulcimerSf   | RideCymbal                |
|               | DulcimerVel  | Ride Bell                 |
|               | DulcimerWave | Crash Cym                 |
|               | EuroAccrdn   | Splash Cym                |
|               | Harmonica    | China Cym                 |
|               | Banjo        | Rap Cymbal                |
|               | Kalimba      | Cym Wave 1                |
|               | Steel Drum   | Cym Wave 2                |
|               | Tuned Pipe   | Cym Wave 3                |
|               |              | Cym Wave 4                |
|               |              | Cym Wave 5                |
|               |              | Cym Wave 6                |
| <b>Drums</b>  | StandrdKit   |                           |
|               | Rock Kit 1   | <b>Percussion</b> Timpani |
|               | Rock Kit 2   | Timp/Null                 |
|               | Dance Kit    | Agogo                     |
|               | Brush Kit    | Bongo                     |
|               | ElctricKit   | Cabasa                    |
|               | Tek Kit      | Castanet                  |
|               | Rap Kit 1    | Chimes 1                  |
|               | Rap Kit 2    | Chimes 2                  |
|               | IndustrlKt   | Claps                     |
|               | Metal Kit    | Clave                     |
|               | HvyMtl Kit   | Conga Hit                 |
|               | VeloMtlKit   | Conga Slap                |
|               | Wild Kit     |                           |

Conga Rap  
Cowbell  
CowbellRap  
FingerSnap  
Guiro Long  
GuiroShort  
Maracas  
SambaWhstl  
ShortWhstl  
Shaker  
Sleighbell  
Tabla  
Taiko Drum  
Taiko Rim  
TalkngDrum  
Tambourine  
Timbale  
Triangle  
TriangleMt  
Vibrasmack  
Wood Block

**Sound FX**

Rain  
Bird Tweet  
Bird Loop  
Bird Tuned  
Telephone1  
Telephone2  
Jungle 1  
Jungle 2  
Pop  
Pop Attk  
Scratch 1  
Scratch 2  
Scratch 3  
Scratch 4  
Scratch Lp  
Wipe  
Wipe Loop  
Orch Hit 1  
Orch/Null  
Dance Hit  
Dance/Null  
Zap Attk 1  
Zap Attk 2  
Zap Attk 3  
Fret Noise  
Sci Alert

**Rhythm**

SynDrumLp1  
SynKickLp1  
SynSnarLp1  
Agogo Loop  
Bongo Loop  
CabasaLoop  
CastanetLp  
Claps Loop  
CongaLoop1  
CongaLoop2

Hat Loop 1  
Hat Loop 2  
Hat Loop 3  
Hat Loop 4  
Hat Loop 5  
Maracas Lp  
Sleigh Lp1  
Sleigh Lp2  
Shaker Lp1  
Shaker Lp2  
Tabla Loop  
Taiko Loop  
TalkDrmLp1  
TalkDrmLp2  
RattleLoop  
Cyrinth  
WavLoop1.0  
WavLoop1.1  
WavLoop1.2  
WavLoop1.3  
WavLoop1.4  
WavLoop1.5  
WavLoop1.6  
WavLoop1.7  
WavLoop1.8  
WavLoop2.0  
WavLoop2.1  
WavLoop2.2  
WavLoop2.3  
WavLoop2.4  
WavLoop2.5  
WavLoop2.6  
WavLoop2.7  
WavLoop2.8  
WavLoop3.0  
WavLoop3.1  
WavLoop3.2  
WavLoop3.3  
WavLoop3.4  
WavLoop3.5  
WavLoop4.0  
WavLoop4.1  
WavLoop4.2  
WavLoop4.3  
WavLoop4.4  
WavLoop4.5  
Kick Loop1  
Kick Loop2  
Kick Loop3  
SnareLoop1  
SnareLoop2  
Back Beat1  
Crunch LP1  
Crunch LP2  
Psi Loop 1  
Psi Loop 2  
Psi Loop 3  
Psi Loop 4  
Hit Loop

Pop Loop  
Syn Loop  
Tri LoopHd  
Tri LoopSf

Cym Wave 2  
Cym Wave 3  
Cym Wave 4  
Cym Wave 5  
Cym Wave 6

## DRUM MODE

**Kick** Deep Kick  
Big O Kick  
GarageKick  
CrunchKick  
Rap Kick  
Tekno Kick  
AnalogKick  
GrooveKik1  
GrooveKik2

**Snare** Studio Snr  
Big O Snr  
PiccoloSnr  
ScratchSnr  
Brass Snr  
Rimshot  
Rap Snare1  
Rap Snare2  
TeknoSnare  
BrushSnare  
Sidestick

**Tom** Hi Rack  
Low Rack  
Hi Floor  
Mid Floor  
Low Floor  
Hi Cannon  
Mid Cannon  
Lo Cannon  
Hi Rap Tom  
MidRapTom  
LowRapTom  
Hi Hex Tom  
MidHexTom  
LowHexTom

**Cymbal** Closed Hat  
Open Hat  
FootClosed  
RapClsdHat  
RapOpenHat  
TekClsdHat  
TekOpenHat  
RideCymbal  
Ride Bell  
Crash Cym  
Splash Cym  
China Cym  
Rap Cymbal  
Cym Wave 1

**Percussion** Agogo Hi  
Agogo Low  
Bongo Hi  
Bongo Low  
Brake Drum  
Cabasa  
Castanet  
Chimes 1  
Chimes 2  
Claps  
Clave  
Conga Hi  
Conga Low  
Conga Slap  
Cowbell  
FingerSnap  
Guiro Long  
GuiroShort  
Ice Block  
Kalimba Hi  
KalimbaLow  
Maracas  
PnoKnockHi  
PnoKnockLo  
SambaWhstl  
ShortWhstl  
Shaker  
Sleighbell  
SteelDrmHi  
SteelDrmLo  
RapCongaHi  
RapCongaMd  
RapCongaLo  
RapCowbell  
Tabla Hi  
Tabla Low  
Taiko Low  
Taiko Hi  
Taiko Rim  
TalkDrumHi  
TalkDrumLo  
Tambourine  
Timbale Hi  
Timbale Lo  
Timpani Hi  
TimpaniMid  
Timpani Lo  
Triangle  
TriangleMt  
Vibrasmack  
WoodBlokHi  
WoodBlokLo

**Sound FX** Bird Tweet  
 Bird Loop  
 Fret Noise  
 Jungle 1  
 Jungle 2  
 Orch Hit  
 Dance Hit  
 Pop  
 Pop Attk  
 Rain  
 Scratch 1  
 Scratch 2  
 Scratch 3  
 Scratch 4  
 Scratch Lp  
 Telephone  
 Wipe  
 Wipe Loop  
 Zap Attk 1  
 Zap Attk 2  
 Zap Attk 3  
 Sci Alert  
 Noise Loop  
 Bit Field

**Wave** HiWhitNoiz  
 MidWhtNoiz  
 LowWhtNoiz  
 High Sine  
 Mid Sine  
 Low Sine  
 HiSpectrl1  
 LoSpectrl1  
 HiSpectrl2  
 LoSpectrl2  
 HiCrickets  
 LoCrickets  
 Inharm 1  
 Inharm 2  
 High Saw  
 Low Saw  
 High Pulse  
 Low Pulse  
 Hi AcidRez  
 LowAcidRez  
 Metal Wave  
 HiMetlMute  
 LoMetlMute  
 Hi DistGtr  
 LowDistGtr  
 Hi PwrHarm  
 LowPwrHarm  
 Hi FunkGtr  
 LowFunkGtr  
 Hi MuteGtr  
 LowMuteGtr  
 HiElecHarm  
 LoElecHarm  
 ClsclHarm

HiBassHarm  
 MidBassHrm  
 LowBassHrm  
 HiSlpBass  
 LoSlpBass  
 Hi BassPop  
 LowBassPop  
 Muted Bass  
 Stik Bass  
 StudioBass  
 JazzFingrd  
 JazzPicked  
 Fretless  
 AcousBass  
 60's Combo  
 Hi Piano  
 Mid Piano  
 Low Piano  
 High Sync  
 Low Sync  
 Hi Synth  
 LowSynth  
 Ahhs Low  
 Ahhs Mid  
 Ahhs High  
 Oohs Low  
 Oohs Mid  
 Oohs High

**Rhythm** Agogo Loop  
 Bongo Loop  
 CabasaLoop  
 SynDrumLp1  
 SynKickLp1  
 SynSnarLp1  
 CastanetLp  
 Claps Loop  
 CongaLoop1  
 CongaLoop2  
 Cyrinth  
 Hat Loop 1  
 Hat Loop 2  
 Hat Loop 3  
 Hat Loop 4  
 Hat Loop 5  
 Maracas Lp  
 Sleigh Lp1  
 Sleigh Lp2  
 Shaker Lp1  
 Shaker Lp2  
 Tabla Loop  
 Taiko Loop  
 TalkDrmLp1  
 TalkDrmLp2  
 RattleLoop  
 WavLoop1.0  
 WavLoop1.1  
 WavLoop1.2  
 WavLoop1.3



WavLoop1.4  
WavLoop1.5  
WavLoop1.6  
WavLoop1.7  
WavLoop1.8  
WavLoop2.0  
WavLoop2.1  
WavLoop2.2  
WavLoop2.3  
WavLoop2.4  
WavLoop2.5  
WavLoop2.6  
WavLoop2.7  
WavLoop2.8  
WavLoop3.0  
WavLoop3.1  
WavLoop3.2  
WavLoop3.3  
WavLoop3.4  
WavLoop3.5  
WavLoop4.0  
WavLoop4.1  
WavLoop4.2  
WavLoop4.3  
WavLoop4.4  
WavLoop4.5  
Kick Loop1  
Kick Loop2  
Kick Loop3  
SnareLoop1  
SnareLoop2  
Back Beat  
Crunch LP1  
Crunch LP2  
Psi Loop 1  
Psi Loop 2  
Psi Loop 3  
Psi Loop 4  
Hit Loop  
Pop Loop  
Syn Loop  
Tri LoopHd  
Tri LoopSf

# 4 : MIDI RULES

**The Basics**

**The Not-So-Basics**

**MIDI Implementation Chart**

# The Basics

The NanoSynth receives data on all 16 MIDI channels at a time. This cannot be altered, but individual channels can be “muted” by the assignment of User Bank Program 127 (see “The Not-So Basics,” next).

During MIDI playback you can change categories and programs at any time, either by sending Bank Select or Program Change messages, or by turning the CATEGORY or PROGRAM knobs on the front panel. In the case of the latter technique, you will only change the program assigned to the MIDI channel that matches the current MIDI knob setting.

There are 640 programs in the NanoSynth. But there are only 128 MIDI program numbers (000-127). To make it possible to activate any of the 640 programs via MIDI, they have been separated into five banks of 128 programs each.

Assuming you are using only one NanoSynth, the first bank (General MIDI) is selected by sending a Controller 0 command (Bank Select) with a value of 0. The second bank (User Bank) is selected using a Bank Select command with a value of 1. Banks 2, 3, and 4 are selected using Bank Select commands with values of 2, 3, and 4 (respectively).

Working solely from the front panel, only the 256 programs in the General MIDI and User banks are available. These are organized in 16 categories of eight programs each.

The 16 categories are chosen using the CATEGORY knob. They are:

- Piano
- Chromatic
- Organ
- Guitar
- Bass
- Strings
- Ensemble
- Brass
- Reed
- Pipe
- Synth Lead
- Synth Pad
- Synth FX
- Ethnic
- Drums/Percussion
- Effects

Individual programs for these categories are selected using the PROGRAM knob, with positions 1-8 representing programs in the General MIDI bank, and positions 9-16 representing programs in the User bank.

**NOTE:** It’s possible to get confused here, if you don’t pay attention, by the interaction of the front panel knobs and incoming MIDI Bank Select and Program Change commands.

First, when you send Bank Select and Program Change commands, the front panel knobs don't move. This means that you could easily be playing PIANO 1 via MIDI, say, while the two knobs point toward EFFECT 12. Don't be fooled.

Secondly, the latest Bank Select command that the NanoSynth receives, either from its front panel or over MIDI, is what it pays attention to. For an example of this, consider the following situation. Using MIDI, you select the User bank and a certain program you like. Then someone comes along (while you aren't looking) and turns the PROGRAM knob setting for that MIDI channel to one of the General MIDI bank programs. Now General MIDI is selected, and if all you send the NanoSynth is a Program Change command (instead of a Bank Select followed by a Program Change) you won't get the program you wanted. Instead, you'll get the same-numbered program in the General MIDI bank.

**TIP:** Because of this, I suggest that you always send both a Bank Select command and a Program Change command, together, when controlling your NanoSynth via MIDI.

**NOTE:** Another possible source of confusion is that the front panel knobs on the NanoBass and NanoPiano operate just a little differently than the front panel of the NanoSynth, because (1) those units only respond on one MIDI channel at a time, and (2) they aren't organized around the eight-programs-per category structure mandated by General MIDI.

**CONTROLLER 0 vs. CONTROLLER 32:** Some sequencers automatically use Controller 32 commands for selecting banks on an instrument. Please be aware that the NanoSynth does *not* respond to Controller 32 commands. The only way to select banks on a NanoSynth via MIDI is to use Controller 0.

## The Not-So-Basics

I mentioned earlier that using MIDI gives you real-time control over lots more program parameters than you can adjust from the front panel. Here I'd like to encourage you to experiment with just that.

Sending Mod Wheel data, for example, does some very neat things in various programs. In some (like most of the electric pianos) it will adjust tremolo. In organs it will speed up and slow down the lezlie speaker effect. In other programs it will open the filter for a nice *waaaah* sound. Try it and see.

But don't stop there. The four MIDI controllers used across the board in the Alesis QS series of synthesizers can yield great results, too, assuming the program is designed to respond to them. These controllers are 12 (often filter control), 13, 91, and 93.

**NOTE:** The NanoSynth conforms to the General MIDI spec, which officially identifies controller 91 for "reverb" and controller 93 for "chorus." But don't forget that while the NanoSynth is multitimbral, it only offers one effect at a time – the effect that is part of the program assigned to MIDI channel 1. Which may not be reverb, depending on the program. Controller 91 can be used to control the per-channel "send" level to this effect, whatever it may be.

## Why User Bank Program 127 (“Effects 16”) Is Silent

The NanoSynth responds to all 16 channels, all the time. To silence a particular MIDI channel (or set of MIDI channels) you must assign a special “blank” program to that channel (or channels). This program is #127 in the User bank.

This is easy to do via MIDI. Simply pick the channel you want to “mute” and then send out a Bank Select 1 command followed immediately by a Program Change 127 message.

To make such an assignment from the front panel is not quite so easy, but still far from difficult.

- (1) Choose a MIDI channel using the MIDI knob.
- (2) Turn the CATEGORY knob to EFFECTS.
- (3) Turn the PROGRAM knob to 16.
- (4) Use the MIDI knob to select the next channel you wish to silence.

**NOTE:** User bank Program 127 has been hardwired permanently into the NanoSynth. It cannot be deleted, edited, overwritten, or changed.

# MIDI Implementation Chart

|                         |               | Transmitted | Recognized    | Remarks           |
|-------------------------|---------------|-------------|---------------|-------------------|
| <b>BASIC CHANNEL</b>    | Default       | 1-16        | 1-16          |                   |
|                         | Changed       | 1-16        | 1-16          |                   |
| <b>MODE</b>             | Default       | O           | Modes 3, 4    |                   |
|                         | Messages      | O           | All Notes Off |                   |
|                         | Altered       | O           | O             |                   |
| <b>NOTE NUMBER</b>      |               | O           | 0-127         |                   |
|                         | True Voice    | O           | 0-127         |                   |
| <b>VELOCITY</b>         | Note On       | O           | X             | 7-bit Resolution  |
|                         | Note Off      | O           | X             |                   |
| <b>AFTERTOUCH</b>       | Keys          | O           | X             |                   |
|                         | Ch's          | O           | X             |                   |
| <b>PITCH BENDER</b>     |               | O           | X             |                   |
| <b>CONTROL CHANGE</b>   | 1             | O           | X             | Mod Wheel         |
|                         | 7             | O           | X             | Volume            |
|                         | 10            | O           | X             | Panning           |
|                         | 11            | O           | X             | Expression        |
|                         | 64            | O           | X             | Sustain Pedal     |
|                         | 91            | O           | X             | Effect Knob Level |
| 123                     | O             | X           | All Notes Off |                   |
| <b>PROGRAM CHANGE</b>   | True #        | O           | 0-127         |                   |
| <b>SYSTEM EXCLUSIVE</b> |               | X           | X             |                   |
| <b>SYSTEM COMMON</b>    | Song Pos      | O           | O             |                   |
|                         | Song Sel      | O           | O             |                   |
|                         | Tune          | O           | O             |                   |
| <b>SYSTEM REAL TIME</b> | Clock         | O           | O             |                   |
|                         | Message       | O           | O             |                   |
| <b>AUX</b>              | Local Control | O           | O             |                   |
|                         | All Notes Off | O           | X             |                   |
|                         | Active Sense  | O           | O             |                   |
|                         | Reset         | O           | O             |                   |

X= YES  
O= NO

## 6 : SOURCES FOR STANDARD MIDI FILES

There are a number of companies selling standard MIDI files tailored to drive General MIDI instruments such as the NanoSynth. Places to look for such files include your local music store, the ads (especially the classifieds) in magazines such as *Keyboard* (<http://www.keyboardmag.com>) and *Electronic Musician* (<http://www.emusician.com>) ...and on the web.

A great guide to on-line MIDI file sources can be found at [http://pacbell.yahoo.com/Entertainment/Music/Computer\\_Generated/MIDI/Files](http://pacbell.yahoo.com/Entertainment/Music/Computer_Generated/MIDI/Files). This site lists over a hundred actual download sites. Two personal favorites from the list are The Classical MIDI Connection (<http://midiworld.com/cmc/>) and The Classical MIDI Archives (<http://www.prs.net/midi.html>). Once you start looking, you'll surely find your own!

# 5 : CREDITS

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...and thanks to KEITH BARR, for believing in the vision.