



## **ALESIS SR-16 16 BIT STEREO DRUM MACHINE**

### **VIDEO TUTORIAL TRANSCRIPTION**

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## **CD ONE**

### **Introduction**

The SR-16 is a little bit deceptive because it's just this little box and a lot of people don't realise how many functions are in there. So I think one of the things that you really need to get clear in your head is what application you want to use it for and I can tell you about the various things it can do.

*Can I use it live on stage?*

Actually that's one of the most interesting things about the SR-16. It has a bunch of features for live performance where you can actually improvise tunes on stage and record the patterns of that improvisation so you can actually create a song in real time while you're playing with other people. There are also foot switches that let you to go rapidly between different patterns as well.

*How about as a sound module?*

It does that too in fact there's a special mode that lets you access a whole bunch of different drum sounds in there. You can map them across an entire keyboard so you are not just limited to maybe 12 or 16 sounds. You are not just limited to the sounds on the pads here.

*How about if I wanted to use it in my studio at home?*

As part of a midi set-up you can use the note mapping with a sequencer, or you could use it as a master clock for your sequencer, plug it right in and drive all your other gear as well.

*It's got a lot of features!*

Probably the best place to start is a description of what the unit does and how to hook it up.

### **Basic Hookup**

It's a fairly easy device to understand because it does have a big display and a pretty informative one. It tells you what modes you are in and gives you a lot of feedback on stuff. If you try to ask it to do something that it doesn't want to do, it will tell you what it wants you to do or it will tell you that something can't be done. Like if you try to save to a preset pattern that's already stored in there or something it will tell you about that.

### **Output Jacks**

In terms of hookup there are four outputs. For people who are used to just a stereo output it may seem a little strange. What the SR-16 does is any drum sound can be assigned to anyone of two stereo pairs. So what this means is that you can have for example a sub-mix of the track drum sounds and a sub-mix of the percussion sounds, each going to their own stereo feeds. That can go into a mixer and you can bring up the percussion and the track drums independently. That's one option.

Another option of course is that you can just use the stereo and ignore the other outputs or you can even use it in mono. If you really want to get fancy, let's suppose

you want to process the snare drum to some mondo killer reverb sound or something. You can take the snare drum sound and pan it to one output exclusively and process that while all the other drums are going through a sub-mix and then maybe even take another drum and pan that to the fourth output. So you have a choice between mono, stereo, two stereo spreads, four individual outputs, or quad if you are so inclined.

*That could go right to a four-track recorder and by pass the mixer if you didn't have one?*

Yeah you could do that and end up with a stereo spread on both channels.

### Tape Jack

The next jack over is the tape in/out jack. This confused me the first time I tried to set it up because I kept looking for the in and out jacks but it's one jack that does both. So when you are doing a tape save you run that to the input of your tape recorder. If you are doing a tape dump back into the machine, it's the same jack in either case.

### MIDI Jacks

Next we have the two MIDI connectors. There's a MIDI in and a MIDI out but the MIDI out can be turned into a MIDI through. That relates to if you want to use it in a MIDI set up where maybe you have some signals coming in there and you want them to go to another unit. For the drum controller that's where the MIDI in is crucial because you are going to be sending in notes.

### Footswitch Jacks

The next couple of jacks over are footswitch jacks. What these basically do is one duplicates the stop/start functions, you can kick something off on stage. They do more than that as well they let you switch between different patterns and even set the beginning tempo of something so you can tap out a tempo on the footswitch and be ready to go at that tempo when you start playing.

*That would be great if I were a guitar player doing a single gig somewhere. I could start up my tempo with my footswitch and then kick into my song and start and stop it.*

Well as a matter of fact the guy who designed the software for this was very conscious of that application because apparently a lot of people who had HR-16s were playing the same pattern over and over again. So I think in his quest to make better music out there in the world he made it possible so you could have some variations and do that with the footswitches.

### AC Adapter

Then there's the power connector and the on/off switch. The one thing I do advise is that if you are using the unit with an outboard transformer like this is plug it into a barrier strip and turn it on and off at that point. That way you don't have the transformer in the AC power line all the time where it tends to get warm.

### Front Panel

In terms of that actual unit itself, there's a volume control over here. This is the master volume for the entire unit.

Then you'll notice that the buttons are grouped into certain groups here. The lower two rows are the actual sounds themselves, they actually play the different drum sounds. You are not limited to these sounds by any means, you can reassign them, create different drum kits, and in fact there are 50 preset drum kits that assign particular drums to particular pads but then you can create 50 of your own as well. So if you want to have 12 different snare drums you can do it.

*12 snare drums on all of these (point to pads)?*

All different snare drums or different tunings or whatever you want to do.

*And then I could go through 50 different kits that are already preset just by toggling through my menu?*

### Factory Presets

The whole point of this, it's kind of a schizophrenic drum machine. It has a bunch of preset patterns – rock, jazz, new age, polka and if you look on the bottom of the unit there's a sticker which shows what the different patterns are. So if you don't want to get into programming, and you just want to take the thing out of the box and get some programmes, or if you're hot into writing a tune and you just want some rock grooves while you're writing, no problem it's there.

It's the same with the drum sets you have these default drum sets you don't have to sit there and programme them if you don't want to. On the other hand after a while you'll probably go "gee I wish I could do this one thing" and that option is there. You'll probably find that you'll end up using a combination of the two, even after you've come up with your own presets and your own drum kit assignments there will still be times when you'll just reach for hard rock pattern 3 and start writing a tune.

So anyway those are the basic drum pads.

### Velocity Buttons / Dynamic Articulation

One thing about these pads is that they are velocity sensitive so it's not just one volume level. The harder you hit it, the louder the drum sound and on many of the drum sounds, they actually trigger different samples at different levels or do different things to the samples so that there's a real feeling of dynamics to the sound.

*So it's the same sample or a different sound?*

It's a variety of techniques. In some sounds it changes the start point for example so that if you hit it softer there's not so much of an attack. On other sounds they actual different samples are brought in from what I understand.

*So it gives a better feel, a more natural feel to your playing?*

You have that sense of dynamics. One of the big problems with drum machines has always been that robot kind of sound, you know the high hat that just drones on forever and ever and that sort of thing. This is a way round that problem and it's really quite effective.

## Button Velocity Levels

I should mention too since you're planning on using an external controller that the buttons will quantize your playing to 8 different velocity levels and that's done to remove a certain degree of ambiguity from the way the buttons feel. It's real easy to get a correlation between how hard you hit and how loud it is.

But if you're using a sophisticated kind of drum controller like this it will respond to all 127 MIDI volume levels so you can get a high degree of precision when you're coming through MIDI or with a sequencer. So that's another one of those extra kinds of features that's good in a studio context.

## Function Buttons

Now other buttons, this grouping here (top right) are more or less what I call functions buttons they trigger various functions like MIDI set up, you'll never guess what that's for. Record set up, you probably won't guess that one either. Drum Set, that's the one you press when you want to call up a drum set or create a drum set.

Over here (top left), I call these the data entry buttons and also you can think of them as tape transport in the sense that there's a play and a stop control. A lot of times when you're working with the SR-16 you'll need to enter a number, for example if you want to call up pattern 33 you need to type in 33 and these are the buttons you need to do that.

## Select a Preset Pattern

One of the things too is that you can often accomplish the same function in several different ways like if you want to call up a preset pattern, you can enter the number directly with the number keys or you can use the up and down buttons to get the next higher or next lower numbered patterns.

Let's talk a bit about how the SR-16 organises patterns. Like most drum machines this is based on a song pattern type of protocol. In other words you come up with short patterns of maybe 4,8 or 16 beats, something like that, you know verse, chorus bridge and then you have a song mode where you can string them all together. You're not limited to doing things that way, you could make it all one long pattern if you wanted to. It's a little less memory efficient and it does take more time. If you have something that repeats it's a lot easier to just do it once and repeat it in the song.

## **SR-16 Pattern and Song Basics**

### Preset and User Patterns

In addition to the normal kinds of patterns you'd expect from a drum machine, the SR-16 does things a little bit differently. There are 50 preset patterns, these are in the ROM, they are unalterable, they are in the machine, and they are always there no matter what happens they are available.

There are also 50 user patterns which you can programme yourself and come up with your own beats and all that.

### A and B Patterns

Within each one of those patterns there are A and B variations. Now there's a reason for this and the main reason is that it's very easy to transition between the two, using the footswitches or using the front panel controls or whatever. So typically for example the A part would be the verse and the B would be the chorus. So you don't actually have to switch to a different pattern you can just transition from one pattern to the other.

*That's great.*

It gets better.

### Fill Patterns

In addition there are fill patterns. What these are is transitional patterns that form a fill as you go from an A to a B pattern or a B to an A. For example let's suppose you have A and you want to transition to B. If while the A pattern is playing you hit a fill, the fill pattern will take over, play a fill, and then dump you into B. This can all be handled with footswitches and so on.

### Preset / User Pattern

Let's show you how this works let's call up a pattern. First of all let's make sure that it's a preset pattern and not a user one. Here is the preset/user button. You press that and the display shows and if user isn't showing it's assumed to be a preset.

### Perform and Compose Modes

Now there's also a perform and compose mode. Perform is when you play back, compose is when you record. A couple of people have asked me why the SR-16 doesn't have a record button. Well it's a lot more flexible than that, because you can drop in and out of perform and compose modes at any time. You can be recording in compose mode, decide you maybe want to audition some different drum sounds or change the quantization rate or change the metronome click or something like that. You can drop out of compose mode, go into perform mode, audition your changes, go back into compose mode, the thing's playing the whole time and you're right back in the groove again.

*So you're not stuck in that pattern thought to completion if you're in record mode?*

The next thing is that you don't have to stop and start. If you have a creative thing going and you go "gee I really want to make this one change", you don't have to stop, press a bunch of buttons, make the change, restart it again and by that time the muse has taken off on vacation. That's a real convenient feature as far as I'm concerned.

Anyway we have the preset pattern selected, we are in perform mode, again that's indicated on the display and let's choose a pattern, let's start with zero zero. So you type in zero zero and there it is, the display says it is Rock 1. Now again we can use the up down buttons to select different patterns but we'll just start off with Rock 1 here. Now you can probably figure out how to get it to play.

*I think the play button would work on that*

Let's press that. There it goes.

## LCD Display

You'll notice that the display is giving you a bunch of information while this is happening. There's a beat counter which shows you what beat you're on. The pattern window is showing you what pattern is selected and whether it's an A or B variation. If we had a fill selected it would show you that as well.

## Temp Flash

Also, there's the tempo. You'll notice there's a little flashing cursor and that's showing you the down beat. This is handy that flashes all the time, even when it's stopped. So that if you're on stage and you want to give the countdown, you don't actually have to have it play you can just be following it, read it and go 1, 2, 3, 4 and then kick everybody off.

*So you don't jump ahead of the drum machine or fall behind it before you kick the start button?*

## Tap Tempo

Let's suppose you're on a dimly lit stage and you can't see the flashing block. There's a way round that too. If you press the stop button repeatedly, at the temp that you want it will average your hits and it will show the tempo in the display. You see right now I'm hitting around 125, 124 or something like that and it stays with that programmed tempo. So you can just be 1, 2, 3, and 4 and be ready to go.

## Tempo Increment Buttons

You also change the tempo with these buttons as well. So there's a bunch of different ways to get tempo.

Let's go back to playing a pattern. What kind of tempo do you want?

*150 b.p.m.*

OK let's scroll up to 150, press play and listen to Rock 1.

## Using A/B Variations

Now let's suppose you want to switch over to the B variation. As soon as you press the B pattern, after the 8<sup>th</sup> beat is playing it will go over to the B. In other words right now A is an 8 beat pattern, if you press B at any beat before beat 8, it will go into the B pattern after the down beat of beat 8. While it's waiting to go to the pattern, it will show you that it's waiting.

So let's go to the B pattern here, it says next pattern will be zero zero B. If you want to back to A again press A and it will be there. You don't have to worry about queuing up a particular pattern, you just tell it that you want it to go and when it gets a chance it will go.

## Using Fill Transitions

Now the fills are a similar kind of thing. Generally though you don't want to start the fill just before the end of a pattern, you want to take advantage of the fact that there's 4 or 5 beats of fill there. So let's go from the A to the B pattern using fill. Press play

and we'll kick it in about halfway by pressing fill and there we are on the beat pattern. Now let's fill back to the A one, we press fill and there you are.

### Fill Without Transition

You don't have to transition over to the pattern if you don't want to, you may just want to have the fill and go back into another groove. To do that, just hold the fill button down pass the downbeat. What we'll do is we'll kick in the fill, the fill will play but as long as we have the fill held down, it will stay on the A pattern.

### Footswitch Tempo and Transitions

Now again this can be done with footswitches, these transitions and the stop and the start and all that and tap out the tempo with the footswitch all that as well. So it makes it very very flexible that way.

*No need to turn around and press buttons just keep it all on the floor.*

## **Songs**

Exactly. So that's basically how you play back presets. I think it's time to string those together into a song. There's two ways of doing songs on the SR-16. A more conventional way is to list the song steps that you want, and then you can also do it in real time. Let's do the listing thing first.

### Create a Song List

For people who like to think through patterns in advance this is a good way to work. The first thing we have to do is get out of pattern mode and into song mode. Now we have a pattern/song button that toggles between those two modes, just like the preset/user toggles between preset and user, and perform and compose toggles between perform and compose.

### Basic Song Features

One difference between songs and patterns is that there are only user patterns. There are no pre-programmed songs except for the demo, because you don't want to use somebody else's songs, if you're making your own.

The tempo is done the same way you have the up and down buttons and the flashing cursor tells you what the tempo is. The first thing you want to do is go into compose mode though first you select your song, right now we have zero zero selected, it can be anything from 00 to 99. Again you can enter the song number with the number buttons or with the up/down arrows.

We go into compose mode and the first thing you see is what's currently in the first step, which is nothing because we haven't done anything yet. So what you do for the first step is enter the pattern you want, let's say you want pattern 1B, so we enter 1 and then B. Probably another fine point I should mention is that the SR-16 always expects to see a two digits number for patterns, so if you are entering a single digit number like 7 always hit a zero first. So we have our first step, 01B. Let's say it's time to move onto the next step, hit the up arrow and you've got the second step again it says this is where the end of the song is now. Let's try 01A this time.

*And each step is 8 beats long?*

It doesn't have to be but the preset ones I'm using just now are. We move onto the next step, step 3 let's say pattern 23, so up arrow, enter 23. You'll notice also that each time you enter a pattern in song mode it comes up as a user pattern and you have to remember to turn that off by pressing the preset/user button.

Now I'm not sure that I remembered to do that on the first step, so what I can do is go back to the first step with the up/down arrow and edit it. Editing it is real simple just select the step and enter in whatever change you want to make. If you want to make this an A pattern instead of a B, just hit A, that's all that you need to do to edit. That's the most basic editing of course there's other things that you can do like insert steps and delete steps and all that, we'll get into that a little bit later. But that's the basic procedure you just move through a step at a time, entering patterns one at a time until you have your basic song.

So now if we want to go back to see what we've done, you can confirm that we have the right patterns in the right order and any time you want to hear what you've done, just press play. We'll go into perform mode and press play, and there it is.

*What if I pressed play while it was in the compose mode?*

A couple of different things happen. If you're in compose mode, and you're somewhere in the middle of the tune and you press play, it picks up from that point. This also means that you can start in the middle of a tune so you don't need to start from the beginning each time. If you want to start from step 2, just go into step 2, press play and there you are. Again the display will confirm you're in step 2, and it will give the pattern, the beat and it will play on from that point.

If you're in perform mode and you press play, it will always start from the beginning. Now the reasoning there is that while you're in compose mode, you may want to be able to start in the middle of the song and work on from that point, or you may want to play something up to a certain point to see what you've done and carry on from there. So that's a convenient feature too.

Now like I said I think where the real action is with this thing is with live performance. Remember all the preset patterns that you feed in – user or preset, as you play them it will remember where the fills go all that sort of thing. So let's show you how to do that.

### Erase a Song

Let's begin by erasing the song that we have in here, and the way to do that, you can only erase in perform mode, because in compose mode the erase function deals with individual steps and things like that. So if you want to erase a whole song you go into perform mode, select a song, press erase, hold the button, the display says song erase?. Now you'll notice that the display says press play. This is sort of the, are you sure yes/no option on a computer, because there are certain functions on the SR-16, you might not want to erase a particular song or particular pattern. You might think that you are erasing a step and not realise you are in perform mode so you want to have some kind of confirmation.

So it says song erase, you have to hold down the erase button and press play. As long as you hold down play, the display will show song erased to confirm that you've actually done it. Then you release both buttons and your song is erased.

## Real Time Song Creation

The real time thing, you go into compose mode and you do have to enter the first pattern that you want. You do have to tell it where you want to start. So let's say we are going to start with pattern 01A preset pattern. Then you just press play while it's in compose mode. That pattern will keep on looping until I give it something else to do. So it's busy recording. Now suppose you want to add a fill, press fill, now it's gone over into pattern B, and it will keep on playing pattern B.

Now let's suppose you want to go to pattern 04A. At any time we can enter pattern 04A and now it transitions over to pattern 04A. All the time that this is happening this is remembering all the button presses you're making and all the keystrokes, and the fills. Now notice here I held the fill down so it will keep playing on pattern A. I'll do that once more and the next time I press fill I'll let it go through to B.

*What if I wanted to throw a hand clap in there right now?*

You can play along with it while it's doing it but it won't remember it. It's just remembering the patterns and the order in which you are playing them. What you would have to do is go back in and put the hand clap in the pattern that you want to use.

## Song Editing

Now in terms of editing, there's a bunch of stuff you can do when you go back to play this. Let's go into perform mode and start playing. As you listen to it you might say gee there's a step I really want to delete a step here or I want to add a step here or something like that. You have three basic options.

### Replace a Step

The first is to replace a step. Now we already showed you how to do that before by selecting the appropriate step and selecting preset or user. To give you an idea of how to do that go into compose mode cause we're composing, use the up or down arrows to select the right step. Right now we have pattern 01B at Step 6. if we want that to be pattern 54, oops it can't be pattern 54 cause there's only 50 patterns so it took me to the next highest pattern that was legal, that's kind of nice. So 54 is an unreasonable demand let's say 23, so you enter 23 and there it is. You don't have to do anything else like hit enter, it just assumes that you're adult enough that if you want to make the change you want to make the change, and again it could be the A or the B.

### Erase a Step

To erase a step, you'll never guess but the erase button has a lot to do with this. So you select the step you want to erase, let's say Step 7 and hold down erase.

*It says step this time though?*

Yeah, do you really want to erase the step, you know you're not erasing a song, you're erasing a step it says press play, press play it says step erased and voila, one less step to worry about.

### Insert a Step

Now if you want to insert a step, on other words not just replace the step with another one but actually insert something in between, you scroll ahead to where you want to insert the step, like right now it's at Step 7 which means that you will insert something into 7, and what was Step 7 will become Step 8, what was 8 will become 9 and so forth.

*It pushes everything up?*

Right, just as when you erase it brings everything back one. It takes care of all that renumbering for you. So in this mode to insert, there isn't an insert button but the copy button is what performs that function. You are basically copying a pattern into the tune. Hold down copy it says insert, enter the pattern you want to insert, let's say 12, and there it is. Press play, this is something you do have to confirm, it says insert done, and there you go the step's been inserted. So now we've done a bunch of different editing things that way.

### Insert a Fill

Now what's even cooler is you can also add a fill after the fact. Now if you remember at the beginning I had a bunch of pattern 1s all in a row, Steps 1 to 4 were all pattern 1s. I had a fill in Step 4, but let's say I also want to have one in Step 2. Scroll back to Step 2, press fill and the display says where do you want this fill to start? So you can determine whether the fill kicks in at 4 beats into the pattern, 2 beats into the pattern, or you can even get down to individual clock pulses into the pattern. Each beat has 96 clock pulses. It's sub-divided and these are called sub-beats. So if you want something to start half way through a beat you would set it to 48 clock pulses you know in addition to the beat or anywhere so you can have that fill take over at any point.

If we want it to take over at say the 4<sup>th</sup> beat, you can just enter 4 and there you are ready to go. Now notice this is a 3 digit number so again you have to enter leading zeros and then once you've done that your fill is in there. Now when we play back listen to what happens. It will play Step 1 and then it will play Step 2 and go into the fill. Remember to go back to the beginning go into perform mode. Now it's playing through the first step and there's the fill.

### Erase a Fill

Now let's say you listen to that and think I don't really like that fill after all, you don't have to re-record the song or anything. Go back to compose mode, select the step you want to change, and if it's an A fill, just press the A button and the fill goes away. If it's a B fill press the B button and the fill goes away and you're back to a normal pattern with no fill in there.

*So I don't press the fill button to toggle it on or off?*

Actually I believe you can do that too but I just find it easier to say if you want the A pattern by itself press A, if you want the B pattern by itself press B. One of the neat things is that there are often several ways to do the same function and far from being confusing, what this means is that you can gravitate towards the approach that works best for you but it's not gonna be the same for everybody. Some people are gonna want to adjust the tempo very precisely one digit at a time, or maybe to speed up during the course of a song, you know inch up the tempo a little bit. Others are gonna want to tap for the particular feel that they want, so it all depends.

### Name a Song

So those are the basic song construction techniques. The one thing we do need to cover though is how to name a song because it kind of gets boring to see no name all the time, you might want to have a tune or something like that.

To name a tune it can be in either perform or compose mode and what you do is you press record setup and it gives you the name on the display. Now remember “no name” means that the song has data recorded in it but you just haven’t named it yet. Now if it had no data in it at all it would say “empty song”. The main reason for that is so that if you’re in a fit of creative frenzy and you call up a tune and you want to have an empty tune to work with, an empty song, you know that you have that. So the way to name is real simple. The tempo/page buttons move a cursor underneath each character and it wraps around so once you get to the end it comes out the other side. The arrows buttons choose the actual character, it changes the actual character. You have the whole alphabet plus you have a variety of symbols. I’ve found symbols kind of useful if you want to identify a particular type of tune. If you work with a lot of rock stuff or jazz stuff it might not be obvious from the title but you can adopt a kind of symbol, whatever works for you. So that’s how you name it.

### Extend a Song

One thing I should also mention is that during playback, this is a handy feature so let’s just do it. In perform mode, if you want to extend a song, let’s suppose that you’re guitar player is getting into the solo of a lifetime and you don’t want to go back to the bridge just then. If you hold down the fill button during a song step, that song step will just keep looping indefinitely. This can also be done with a footswitch so you can be playing guitar or keyboards with your hands and be able to do it with a footswitch. So that’s another little extra live performance feature so even though it may only have a certain number of song steps you can play around with that.

### **Record a Pattern**

I think the probably the next thing to do is get into actually recording a pattern. The first thing we need to do is get out of song mode.

### Select a user Pattern

This time we want to select a user pattern so we press the preset/user button and we’ve confirmed by the display that we have a user pattern going. What you usually want to do is set up a pattern. You want to set up certain parameters before you start recording.

### About Quantization

You want to have a metronome click, you want to have quantization. The whole concept quantization is that it rounds off your playing to the nearest beat. If you have the quantization set to 16<sup>th</sup> notes, everything you play will fall on a 16<sup>th</sup> note if you hit a little bit before or a little bit late it will fall there, the same with 8<sup>th</sup> notes or ¼ notes or anything else.

One of the useful things about the SR-16 is that you can change the quantization while you’re recording. So you can do your ¼ note kick drum with ¼ note quantization and then do the hi hat pattern with 16<sup>th</sup> notes or whatever you want. All this is found in the record setup menu.

## Setup Menus

There are 3 setup menus, from drum set, record setup, and MIDI setup. These all have the same protocol for parameter selection. The thing that's nice about that is you don't really need to remember the stuff in the manual to get back to it and figure stuff out you can poke your way through the pages and find what you need.

*That's great I hate manuals anyway.*

We're living proof of that right now, I haven't read the manual in weeks and we're about to do the record setup function.

## Record setup

So what we'll do is go to record setup, course if I make a mistake we'll also know why that happened. We'll go into compose mode. As soon as we went into compose mode a bunch of things lit up on the screen, quantize, swing and click. These are probably the most important parts of the record setup procedure. Quantize will show you what the current quantization rate is, in musical notation here's a 16<sup>th</sup> note, so I'm into a 16<sup>th</sup> note quantize. Swing is off.

### 39.17 About Swing

There are a lot of misconceptions about swing. All that swing does is take pairs of equal value notes, stretches the durations of the first one and shortens the duration of the second one to compensate. So instead of taking up 50% of the pair, the first note will take up 54% of the pair and the second will be 46. Now here you have 3 different swing options which we'll get into when we hit that in the menu.

So we have that and the click which is the metronome and there's a little symbol there which shows that the click right now is an 8<sup>th</sup> note.

So let's go into the record setup menu by pressing record setup. There are several pages in the setup menus. The display shows the page in the lower right hand corner in nice big type. The tempo/page buttons, in addition to selecting tempo, they select pages when you're in a setup menu. Like everything else they pretty much wrap around from page 1 to page 10, the only exception here is you go through the cursor and you can name patterns as well.

### 40.25 Quantize Select

The first page is quantize select. The way that you determine the quantize is with the up/down buttons to go through the various options. Here we have a ¼ note, ¼ note triplet, 8<sup>th</sup> note, 8<sup>th</sup> note triplet, 16<sup>th</sup> note, 16<sup>th</sup> note triplet, 32<sup>nd</sup> note, 32<sup>nd</sup> note triplet and off. This means that it records at the resolution of 96 beats per quarter note. So that means that if you just play a little bit ahead, instead of being shifted to the nearest beat it will fall on the nearest 96<sup>th</sup> of a beat so that allows you preserve a lot of the feel of a real drum part. 96 pulses per ¼ note is pretty high resolution for a drum machine like this. Actually there are many sequencers that have that kind of resolution as well, so it's entirely capable of letting you lead the beat a little bit or lag the beat a little bit and get that feeling in there, just delay the snare that little bit of whatever.

There's times when you want to have both like one trick I found for realistic hand claps is record one hand clap track quantized and then overdub another hand clap

track with quantize turned off. Sometimes they hit on exactly the same place and sometimes there a bit off or whatever and they are always different volume levels and that makes for a more realistic sound.

#### 42.25 Swing Select

The next page is the swing select. Use the up down arrows and you have 54% swing, 58% swing, 62% swing and off. 62% is the common jazz swing.

#### 43.28 Click Select

Page 3 is the click select. This is the metronome. I usually like quarter note metronome but again you can choose different values and there it is.

#### 43.46 Click Volume

Maybe you like it loud, maybe you like it soft, and maybe you don't like it there at all. 70 is the default.

#### 44.03 Pad Velocity

The next page is pad velocity. Here you have several options as to how these buttons are going to respond, depending on whether you're a finger basher, or you have a light touch, or a heavy touch or whatever. "Velocity Loud" means that even fairly soft hits come out pretty loud. So this is weighed for people who have a more light touch but want to get a loud sound. "Velocity Medium" is sort of what you'd expect, a kind of linear response. "Soft" means you really have to hit it hard to make it loud, it tends to be a softer response.

In addition to those three there's also fixed levels. You can set it so that it produces only that volume level, no matter how hard you hit it, one of those eight. "Velocity Fixed 1" would be extremely soft and "Velocity 8" is the loudest, but no matter how hard I hit it, it's the same volume. This is useful if you want to have a string of beats that are all at the same level. I generally prefer to leave it on loud medium or soft.

#### 45.35 Change Length

The next page is the beat length and it can really be pretty much anything you want. Again it is a three digit number, of you want 16 or 32 or whatever.

#### 45.48 Automatic Revert

This is probably a good time to explain a feature of the SR-16 which confuses people at first, but is something that will save you on some sessions some day. It's called automatic revert. What that means is that when you enter a number like that, it has to be entered within a certain period of time. If you wait, it will revert back to what ever had been selected before. The reason why this is useful is suppose you have a certain length set up and you decide to enter another one and you go, "oh wait that was the wrong pattern or something like that", it will revert back to the original pattern if you stop.

You can set the length prior to recording the pattern or after recording the pattern.

#### 47.14 Change Length Start

Now the next feature is similar but this either adds to, or takes away from the beginning, so you can extend the pattern. Let's say you have done a 4 beat pattern and you think it's too complicated but would make a great ending part of an 8 beat pattern, you add 4 beats onto the beginning. You can do this with any pattern whether it's recorded, beforehand, after you've recorded, any time you can add more beats to the beginning or the end. This last page is what adds it on to the end, and this page adds it onto the beginning. The little arrow with the start is what reminds you it happens at the beginning. Again if you extend it beyond the original length, it adds empty space at the beginning, if you remove beats from the beginning, it removes whatever data was in there. If you have a 4 beat pattern and remove beats 1 and 2, whatever was in beats 1 and 2 just goes away it's as if didn't exist and you now have a 2 beat pattern.

#### 48.18 Offset

This is not really part of record setup, this is something you do on playback, but you can offset any drum, you can shift it in time. So if you record a snare drum that's quantised to the beat, and you want it to lay back a little more in the groove, you can enter the amount of offset. That's in 384<sup>th</sup> notes or if you think of 4 beats per measure it's 96<sup>th</sup> of a beat in increments. So you can shift the whole thing backwards, forwards or whatever. Again you can do it with the arrows buttons, minus is one direction and then plus is the other or you can enter with the number buttons.

One thing I should mention, this kind of tripped me up a few times when I started adding offset. This is not a cumulative display. In other words if you offset something back a little bit and then start working on the pattern and then come back to the offset function, it will reset back to zero. It will not retain that setting and show that it's offset by one. So if you want to offset it by one more, offset it by one again and that will add to the offset that was in there. That's a little tricky but most people don't use this kind of feature that much but it's real handy and a lot of people don't understand how much you can change the feel of a part by changing a snare drum.

#### 50.00 Step Mode

Step mode is sort of the equivalent in song mode how you could either enter lists or play them in real time. This lets you actually step through a pattern a beat at a time or at the current quantization level. You can enter drum sounds, modify drum sounds, edit, all that but there's no point going into all that now because we don't have anything to edit yet.

So now we're back to page 1, we've selected our quantization, we have the swing off which is what I want, we have the click setup for quarter notes, we have the volume setup, we have the velocity set to medium, we have an 8 beat pattern, we have no offset. We're ready to rock n roll.

*That whole time we were in record setup mode?*

Right and we get out of by pressing the record setup button again, you press the record setup button once to get in and once to get out and we're back at our familiar empty pattern.

#### 51.08 Record the Part

So why don't you record a pattern? We'll go into compose mode, press play and let's get going.

OK

So you wanted to get some 16<sup>th</sup> notes in there and the quantization was set to 8<sup>th</sup>. This is not problem, drop into the perform mode, then record setup, change the quantization, now it's at 16ths. Drop out of the record setup, go back to compose and now do your overdubs, and there it is.

Try doing a tom now and some tom parts (hits tom pads).

#### 52.15 Record a Fill

Ok so now let's suppose you want to start recording a fill to go along with this. We can just press fill. Unlike perform mode it won't transition to anything, it will just keep repeating over and over again so that you can record what you want. Press fill and it's a blank pattern so feel free to go ahead and do a fill (hits drum pads and laughs at his effort).

*That's kinda strange!*

We can always edit it after the fact! Now we get out of the fill and it goes back to the main pattern.

#### 52.56 Copy a Pattern to a Fill

Now I should add that in a lot of cases you'll want your fill to be just a variation on your main theme. You can use the copy function to copy the main pattern over to the fill and then maybe so some selective erasing or change something, a couple of parts here and there and you're covered.

#### 53.15 About Fills

A fill is always the same length and uses the same drum set as its associated main pattern. In other words if the A pattern uses drum set 1 and is 8 beats long then the fill will also use drum set 1 and be 8 beats long. The other thing about a fill which is interesting is that it does not play the first beat of the fill. It tacks that onto the downbeat after the fill has finished playing. The reason for doing this is that a lot of times the fill will end up going a lot of times round the toms and hitting a cymbal crash on the downbeat, so that's the reason why it handles fills in that method.

It's funny if I hadn't told you, you might not even notice it because it acts the way you want it to act. It does what you expect it to but that is a subtlety to be aware of.

#### 54.10 Spot Erase

Now on that fill you weren't too happy with the part there so maybe it's time to do some erasing.

*I think so yeah*

So let's call up the fill and thanks for making the mistakes by the way, I really appreciate that.

*It was all on purpose of course!*

So what we'll do is we'll go into record mode and there's a couple of different ways to erase. Probably the easiest way to do spot erasing is if you hit a bad beat you can erase it while it's playing. So here we are in compose mode, we'll play the fill.

So to erase a particular part like the kick drum that didn't come in quite right, you hold down the erase button, push down the kick pad just before the part you want to erase and release it just afterwards.

Ok so now we also want to get rid of that tom (holds down erase button, presses tom pad and releases).

Ok so you've got the snare now trying putting on another kick part (presses kick pad several times).

*It's a little bit odd there!*

You can just erase that one kick if you want and then over dub.

*I can throw a crash in there if I wanted to*

Yeah go ahead be my guest (hits crash pad).

#### 55.57 Erase an Entire Drum

You can keep o going with this and take it to whatever level you want. If you wanted to erase an entire drum sound like if you weren't happy with the snare at all you don't have to do the spot erase thing. While it's stopped playing you can hold down the erase button and hit the drum you want to erase and the display confirms the pad number that just got erased.

Now if we play that fill, there's no snare drum. So that's another way to erase.

#### 56.41 Erase a Pattern or Fill

Just as we showed you how to erase a typical pattern before, we're on the fill pattern now and if you want to hit erase you can erase the fill just by pressing play. The default is to erase the larger structure. It will erase the pattern or the fill. You have to hit the drum if you want to erase just the specific drum.

### **CD TWO**

#### 00.00 Step Edit Mode

Now the crash cymbal that you hit, the volume level was a little bit low and you might want to do some more detailed editing than just what you can do with overdubbing and erasing and all that and that brings us to the whole concept of Step Mode editing as part of the Record Setup.

If we go back to the original pattern play it once just to refresh ourselves as to what it sounded like.

If we go into the Record Setup and select Step Mode, this is a multi page menu within the Record Setup menu. So in order to enter Step Mode land all we have to

do is to press play. This isn't a confirmation yes / no thing like before, it's just we have to tell the machine to kick us out of the regular Record Setup and put us into Step Mode land which is really a kind of whole elaborate thing all by itself.

The difference between Step Mode and real time recording is the difference in song mode between assembling a list of patterns as opposed to playing it all in real time. You were just playing a pattern in real time and recording it and editing it in real time with the erase button. But if you want to you can also enter a part a step at a time, put drums in on specific beats, delete a specific drum, change that drum's volume or whatever on a very microscopic type of level. This is also good if you are entering a part from sheet music or something like that. You can observe the sheet music and say OK an eighth note, I need to put in a snare here or a kick here or whatever so it's good for people who are getting started with reading music notation.

Basically the way Step Edit works, is it steps through the pattern at the current quantization rate. Now right now we have the quantization rate set at 16 as the display shows, cause that's what we had it set at before and because it was recorded at 16<sup>th</sup> note quantization we know that there will only be drum beats occurring at 16<sup>th</sup> note intervals, we won't have any 32<sup>nd</sup> notes in there or something. So we can step through this a 16<sup>th</sup> note at a time. If you step through with quantize off, then you have to step through 96 sub beats per beats which can get to be a little tedious. So it's always best to choose the quantization value.

#### 02.18 Add an Event – Change Volume

Now the way you step through are with the page buttons here. Now it shows the next 16<sup>th</sup> note is empty, there's nothing on it. If you wanted to add something there, it's just as simple as hitting the drum you want. While you're there you can also vary the volume. Notice the cursor under the 8 in the display. A cursor means it's a value that can be changed so let's press 7 and give it a volume level of 7, or maybe 6 by pressing 6. You can keep on stepping through.

Now here's one of the toms lets look at what the toms are doing and notice that in the upper right hand of the display, it's showing you what drum is present on that beat. If there's more than one drum on a beat and you keep stepping through it will stay on that beat until it's gone through all the drums on that beat. So for example if you had a snare on here, the next one would show the beat, the sub beat, the volume and the snare would be pad number 2. So you keep on going through.

You can also change the volume by just hitting the pad again. Like there's the snare and you don't have to enter a number you can go (hits pad), or maybe you can't (laughs). Sorry about that, erm, ah there you go, I was hitting it too hard. I had it on a response that weights it to play louder sounds.

*The velocity?*

Yeah that's right the velocity setting and I wasn't taking that into account but as you can see it can change it as well. Obviously this a more accurate way to do it to get the volume changes.

*Can you use the up and down arrow keys as well?*

There you go! So whatever you want to do, its right there and again you can just keep stepping through and insert things, change things. Let's put some claps there and see what it sounds like. So you can keep going through the pattern until you

eventually reach the end and really fine tune something you want. If you have for example a snare roll, it's gonna be very hard for you to get precise volume levels. With something like this you can just scoot ahead directly to where the roll occurs and enter the volumes you want to have it rise up over time or fall back over time.

The other thing I find useful for this is if you want to create echo effects without actually hooking up an echo unit, like if you wanna have a snare that goes dum dum dum, you can step through and put a snare drum at the appropriate places where you want the echo to be and change the volume so that each one is softer than the previous one which also means you can do strange polyrhythmic echoes and things like that.

Since you asked about it earlier too, with odd time signatures on this thing, it's not really an issue because since a pattern can be any number of beats, if you want a measure of 7/4 and followed by a measure of 13/4 you can just make one that's 7 beats long and one that's 13 beats long.

### 5.25 Erase Event

If you want to erase a drum, like here we have tom 3 at beat 4 and sub-beat 48 it's very easy just hit erase and press play and it's gone.

*Just that one beat?*

Only the event that's showing in the window right there at that time will be erased. Now for some reason it doesn't say press play for this operation, it's the only exception that I know of in here, probably because this is a kind of whole separate routine this whole step editing type of thing that sort of follows its own rules.

That's a bunch of things you can do, so you can change the drum sound volume, you can insert a drum, you can delete a drum and that gives you a lot of options. To exit step mode all you have to do is press stop or play or record setup again. The advantage of pressing play is it takes you back to the beginning and you can hear what you did.

### 6.50 Copy a Pattern

A couple of other convenience features I should mention is copying. You can copy one pattern to another like if you like this pattern and its essentially the way you want it but you want to make some modifications, then that's where the copy button comes in handy.

Press and hold copy, the display says copy to pattern, and there's the cursor and the cursor always means that the SR-16 is hungry for data. So you say let's copy this to pattern 1 and you enter that in there, press play and pattern 1 contains what was in pattern zero. So it's now exactly the same. This is particularly useful for copying fills.

### 7.52 Copy a Pad

You can also copy the pattern of one drum to another one. So if you want to double for example having a deep tom hit at the same time as a snare to get a really deep resonance sound. Press copy, hit the drum pad you want to copy and then indicate the pad that you want to copy to, let's say 9, tom. So it says copy D2 to D9, press play. Now when you play back the pattern it's making a much deeper tom sound.

Alesis calls this sound stacking and what this means is that you can build up these monster sounds, like if you want to assign a different snare drum to this tom you can have two different snare drums hit at once, or two snares with slightly different tunings and this really multiplies your options in terms of the kinds of sounds you can get out of this drum kit.

All of a sudden you're not just limited to a snare being a snare so that's another great feature.

### 8.53 Copy a Pad to Another Pattern

You can even copy a part in one pattern to another pattern, this isn't something I do very often so let's see if I get it right. I think you press copy, you press the drum that you want to copy, where you want to copy to, and then the other pattern. No I didn't get that right maybe you press the pattern first, the drum, and then where you want to copy to, yeah. Now this brings up an interesting point. I haven't used that feature in months but the SR-16 is very forgiving. If you ask it to do strange things it will just ignore it or it will say press play. I've never been able to get it to crash.

### 10.16 Copy a Pattern to Itself

You can copy a pattern to itself and all that does is double it. But that's useful if you have a pattern and want to extend it. The same thing with the song, if you copy a song to itself, it just doubles the length of the song or appends it to the end.

*Can you extend the length of a pattern with extra space and then copy the second half and fill the extended half of that extended pattern with another pattern/*

Not really because it deals with patterns on a unit basis. However what you could do is programme a pattern and just fill up the last half of it and then copy those drum parts over. Remember you can copy individual drums parts, from one pattern to another you know pad parts, like individual rhythms from one drum from one pattern to another. So lets say you had a 4 beat pattern, you extend it to 8 beats and you wanted to like have 4 beats of this great tom thing that's happening elsewhere, you can just erase the first four beats of the tom parts so you have just 4 beats left and then copy those drum parts over. You can get into some really abstract type of copying functions but they're there if you want them. A lot of times you don't use them every now and again it will come along and it will really save you a lot of time and trouble.

So that's the basics of the step mode thing. You have the real time recording, the real time editing and the step mode editing so you're covering all those circumstances.

## **Drum Setup**

Now lets talk about the drum sets a bit because that's where a lot of the custom action is too. I should say one other thing before, when I was talking about songs, I just want to emphasise that they can be any combinations of user and preset patterns, there's no restrictions on that at all.

Drum Setup is the same as record setup, you press the drum setup button and again to get out and you have a bunch of pages.

### 12.26 Drumset Select

The first one selects the drumset that you want to edit. Again you have user or preset. The display will show user, if its user and one show anything if its preset. You call it up in the same kind of way but entering a number or using the up / down keys. The same thing that you've learned before for everything else works here too. So you select the drumset that you want to edit. Let's take user drumset 2. let's move on and see what options we have.

### 12.59 Voice Select

Here we are on page 2 (using tempo up button) as showing in the lower right hand corner and we're looking at pad 1 as showing the upper right hand corner. What's assigned to that is Room Kick 1. Now each drum has it's own individual number as well as a name so you can remember it by numbers or remember it by names, whatever's more convenient. Select the drum with the up / down keys, or enter a particular number. Now here you can audition the various kick drums by pressing the pad (goes through a selection of kick drums). There's a lot of kicks in here! So you get the idea.

It doesn't have to be kick. Even though this is the kick pad it can be assigned to anything you've got in here. Now you might say that's an awful lot of kicks but remember that there's 230 or so drum sounds in here so it's not at all unreasonable to have 30 or 40 kicks and 30 or 40 snares, you have a lot to choose from. So that takes care of the drum assignment and that's pretty straightforward.

If you want to pick a different pad just hit and it will show you what's assigned to that pad and then once you have the pad selected as shown on the upper right hand side of the display then just choose whatever you want to have assigned to it.

### 15.05 Volume

The next page is the volume. Hit the pad you want like this closed hat, or the open hat or whatever. You can see the volume change as you select different pads. So you can balance all your mix of the pads that way.

### 15.25 Panning

If you notice in the display I mentioned there were two sets of stereo fields and the panning here changes from left over to right and again you have the choices of using the up / down buttons or the numbers. The same thing – you choose the pad then choose the panning.

### 15.50 Tuning

Tuning is variable from -4 Alesis tuning units to +3 Alesis tuning units. It's not like semi-tones or anything, it's just a particular change in the sound. So lets take the snare (demonstrates change in sound using up / down buttons). For sound stacking applications it's really cool to take on snare tuned up to +3 and one snare tuned down to -3 and trigger them both at the same time. It gives a really really huge sound.

### 16.30 Assign Voices

Assign mode is a little bit complicated but you do have ways you can assign these voices to use up less voices. In single mode each pad uses up one voice. However

they can also be grouped together. In a group hi-hats for example are often grouped together because you don't want to have an open hi-hat and a closed hi-hat playing at the same time. It's a physical impossibility on a real drum set and that's one of the dead giveaways to somebody listening that it's a drum machine if they hear the open and the closed hi-hat at the same time.

There's two different groups that you can assign things to, often hi-hats will be assigned to a group and toms. A lot of times people will assign that to a group because they'll be going round the toms and just playing one at a time. There's no hard and fast rule but the advantage of assigning stuff to a group is that whatever is assigned to the group only uses up one voice.

So if you have both hi-hats assigned to one group that only takes up one voice regardless of which one is playing.

Finally there's a mode called multi. What multi does is, if you re trigger a drum, it will not cut off the existing decay. This a realistic way to handle cymbals for example. When you hit a cymbal and you hit it again the first hit doesn't go away it's still ringing and hanging around in the background. It uses up more voices that way because it has the one that's playing and the one you've just played again but it makes all the difference in the world in terms of creating a realistic drum part.

### 18.13 Output

This chooses whether the stereo goes to the main outputs or the auxiliary outputs. Whatever panning you had set will go to the appropriate outputs. Remember I mentioned earlier you could take something like the kick and the snare if they required extra processing and send them to separate outputs? The way you would do that would be to pan the kick all the way to the left and pan the snare all the way to the right. Now if we zoom ahead to the output page we can assign the snare to auxiliary and the kick to auxiliary. So now we have the snare going exclusively to one Aux Output and the kick going exclusively to the left Aux Output. So now we can run them through our midi-verbs and have this incredible killer snare ambient thing and maybe a slap-back echo on the kick or something and meanwhile all the other voices are doing their thing coming out the main stereo outputs. It's a real handy function.

### 19.31 Save Drum Set

After you've done all this stuff, you've now created this drum set. It'll ask you if you want to save the drum set and it'll let you save to either the existing drum set that you've been altering, or you can enter a another number.

You can only save to a user drum set because the preset one is in ROM and can't be changed. Also the display will say that the drum set has been edited. That's real convenient to know too. You don't have to save it but in most cases if you've gone through all that work you will want to save it. You can press say drum kit number 34 by. It says press play if you want to save it and there you are now it goes back to 34 because that's what you saved it to. So now you're on 34 and you're ready to go.

So that's the Drum Set menu.

*Very simple to do.*

Yeah and you have 50 drum sets. You can think of them as synthesiser patches almost. You can build up a collection of drum sets that you particularly like plus you always have the 50 preset ones in there as well so you have a hundred all told.

*Plenty*

It should take care of you for a little while.

### **20.57 The SR-16 as a Drum Module**

Now let's talk about getting your controller into the picture here. Maybe we should say something about this whole concept. The SR-16, even though it makes a good drum machine and you can play it directly, sometimes you'll want to use it just as an expander module that you control with midi. A lot of people are just going to be interested in this for that fact that it has 230 sounds and couldn't care less that you can programme things or that you can trigger those sounds from a sequencer or trigger from a drum machine, drum controller type thing.

So what you have here, the drumKat, it's a very sophisticated drum controller with a nice feel on the pads and all that jazz. Its third generation stuff and you don't break your wrists hitting it. I presume this is mostly what you're gonna be using with the SR-16?

*Yeah I wanna be able to strike this, with this I can pick up a pair of sticks and hit this and play like a real drummer.*

Now there's a couple of things you can also programme of course using the drum pads. You know you can programme your patterns that way which is a nice thing to do or if you're playing live and you wanna use this as a drum set module and create some sounds you can do that too.

### 22.20 MIDI Setup

That involves getting into the MIDI setup menu. It's the same protocol, you hit MIDI Setup to get into the MIDI menu, hit it to get out again. You learn one button you learn them all.

### 22.34 MIDI Channel

The first thing you'll wanna do is set the MIDI channel that it receives over. Your options are any one of the MIDI channels 1 to 16, or Omni. Now Omni mode responds to whatever's coming in on any channel. If you were playing a sequencer through this OMNI mode would be a real bad choice because it would try to play your bass parts your drum parts, your piano parts, anything that was spewing out of the sequencer. In a situation like this though where you're just driving it with one particular thing, Omni works fine. That way you don't have to worry about setting channel assignments or whatever.

If you were using this with a sequencer, you would want to match the channel in the SR-16 to the channel that the drum part was recorded on in your sequencer. Like if you recorded your drums parts on channel 5, you would set this to channel 5. For now we'll leave it on Omni because that makes it nice and simple.

### 23.35 Drum In

Page 2, Drum In “off” or “on”. This determines whether the SR-16 is going to listen to incoming note data or not.

*Such as this output from this? (points to drumKat)*

So if you play right now it says drum in “off” so you probably won’t hear anything.

*Not a thing.*

Now this is handy for a couple of applications and I’ll try to describe some of the more esoteric stuff as we go along. There may be a situation where you have a part programmed in the SR-16, a complete drum part, and you want to synchronise it to a sequencer, but you already have the notes recorded in here you don’t want it to listen to any of the notes that are coming out of the sequencer, you just want to follow the timing data. In a case like that you would make sure the drum in is “off”.

On the other hand if you didn’t have a part recorded in here and you just want the drum sounds to respond to the sequencer or to a controller like that you would turn drum in “on”. So lets turn it on and see if it listens now.

*I think I heard something there.*

I think I heard something there. I don’t know whether we had the right notes set up or not.

*We are getting sounds.*

We are getting sounds OK. Well that’s what MIDI is all about. See if it wiggles then tweak it!

#### 24.50 Drum Out

Page 3, Drum Out. This determines whether tapping on the pads will produce note data. You may want to programme your sequencer off these pads, you may not, or as it’s playing a pattern, you might want to have the notes sent out. Maybe you have another SR-16 that you want to have doubled the part, that’s a really cool sound.

*Well this will read Drum In data so I can select a pad here and if I strike a pad on the SR-16, this will learn that MIDI note.*

So it will automatically match the notes?

*Yeah.*

Now that is extremely cool because so many times it’s like, “Oh gee what note is the tom, let’s see if the tom is MIDI note 56, now how do I find MIDI note 56 on this”, oh that’s great. So in a case like that you would definitely want Drum Out “on”.

#### 25.43 MIDI Note Assignment

This is the actual MIDI note assignment for each pad. Again as we have had in other displays the upper right hand shows the drum that’s selected and this shows the note that it’s assigned to. So this means pad 1 will be triggered if you hit MIDI note 36, pad 2 will be triggered if MIDI note 32 comes in, and of course this is assuming that

Drum In is “on”. If you wanna change that, like if you want this to be 35, no problem (uses the up / down button). Another useful tip is if you ever find yourself running out of channels in a MIDI session, what you can do is move all the drum notes down to something that’s way below the audible range, so you can layer a flute part or something on and so it responds to the higher notes, and the drums respond to the lower notes. Then what you do is you just set the flute part so that it has a note limit and it just reads note above a certain point and the drum only reads notes below a certain point. That’s one thing you can do with shifting notes way down but most of the time what you’ll be doing is you’ll be matching the notes to the controller that you’re using.

Not all controllers are this sophisticated, sometimes they will have a fixed output, in other words this pad will only put out MIDI note 26, and it’s your responsibility to programme these drums to match your inferior controller. That’s what that function is for.

Now I should also add the sound stacking thing that I was talking about earlier. There’s no law that says you can’t assign two pads to the same MIDI note. So when you’re driving stuff with MIDI you can do sound stacking in the same kind of way. You can have the tom and the snare drum both respond to MIDI note 36 or whatever. So that’s another way to do that.

### 27.30 Clock In

Our next page, now we’re getting into timing data, Clock In “on” or “off”. If you have Clock In “on”, what that means is that if there’s some master timing source that’s putting out stop, start, continue and timing pulses, that will be read by the SR-16 and it will “slave” to whatever’s coming in. It’s a very transparent thing you don’t have to set it to slave or master, if you tell it to respond to Clock In it will respond to Clock In and it will start and it will stop and it will precisely mimic whatever’s going on in the sequencer.

On the other hand you can turn it off if you want it to ignore the timing data. A good example of that would be is if you have a sequence recorded in here, you’re driving it from a sequencer, but you just want to play back the drum sounds. Now normally if Clock In was on, it would not only play the drum sounds it would start triggering whatever sequence was in here and it would turn into a mess. What you would do is turn Clock In off so it ignores the timing data, but Note In would be on so it would listen to the note data.

### 28.36 Clock Out

Clock Out “on” or “off”. This is basically the same thing in reverse. If you want this to serve as your timing master, Clock Out would be on and when you press play on here it will start your sequencer. If you press stop it will stop your sequencer and so on. In fact you can use it as a remote for your sequencer if you’re so inclined.

### 28.58 MIDI Thru

Ok let’s move onto the next page here, MIDI Thru “on” and “off”. What this does is with MIDI thru on it takes the incoming MIDI data that appears at the MIDI In jack, merges it with whatever’s happening in the SR-16, either internally or from you playing the pads, and sends that combined signal out the MIDI Out.

When MIDI thru is off, the only thing appearing in the MIDI output is whatever is happening in the SR-16. But with MIDI thru on you get both the input and the SR-16 merged together.

### 29.30 Programme Change

Programme Change “on” and “off”. This lets you call up different drum kits, drum setups, through MIDI Programme Change commands. So you can do that on the fly and actually change the drum kits. This is not so much used for sequencing type applications or drum machine applications per se but if you’re using something like an external controller like the drumKat.

*I could set up one of my pads here as a MIDI programme change and change drum kits by striking that pad?*

Exactly, so you go from your medium jazz kit to your John Bonham memorial kit or whatever in nano seconds. So that’s real handy and of course if your controller doesn’t have those kinds of capabilities, don’t forget that you can get MIDI programme change foot switches designed for guitarists and you can usually programme them to do random access of programme changes or a sequential combination like call up 34 and then 12 and then 62 or whatever. So that’s a real handy feature for live drummers.

### 30.34 Note Map

Now the note map is a really great feature. One of the problems with a lot of drum machines is that you can only access the drums that you can play at that given moment. It seems like a shame with the SR-16 that has all these different drum sounds available to only be limited to what you can play on the pads. So there’s two different ways of mapping notes to MIDI. We already went through the traditional one where each pad gets its own MIDI note assignment and that’s cool and all that. That’s the one you can use if you want to record into it, if you want to play back that’s the most general purpose one.

But there’s a special mode and what this does, is this lets you take each drum kit and assign it to 12 MIDI notes and you can do this for 128 notes total. Now there’s a chart in the manual that shows how the drum kits relate to the MIDI notes. In other words it’s a fixed combination. The last drum kits, drum kits 40 to 49 are mapped in this octave relationship so drum kit 40 starts at the lowest MIDI note and then goes up 12 notes there for the 12 pads. 41 starts at the next octave higher and maps out for the next octave and so on. So each one of these drums knows that there’s 12 pads and it maps this across the keyboard.

What this means is that you now have access to all these different drum sounds. Now you can still vary which drums are assigned to the notes but the pads have the fixed note assignments. Even though pad 1 of drum set 40 is always going to be mapped to the same note, it could be a snare drum or a tom or whatever else so you still have some flexibility there.

If this is something you’re going to get into rather than just try to explain it here, there is a chart in the manual and the chart shows how all the drum kits are mapped out against the MIDI notes. This is an incredible resource if you want to use it as an expander module or with a sequencer or whatever to have all those drums available.

The only compromise in this process is that you can't record patterns in that mode. In other words this is designed for playback drum expander use only but for that application it's just absolutely wonderful.

And that's it for the MIDI setup menu.

*You know when I was demoing this in the music store I found that no matter what pattern I selected I always had the same drum kit.*

Ah yes that's something that has confused people before and confused people on the HR-16 as well. The way drum sets are handled here now you remember when we had a pattern selected and we called up a drum set it called up a particular drum set that we edited and that was all well and good.

Normally to prevent confusion what I recommend is that you have a one to one relationship between your patterns and your drum sets. In other words drum set no. 1 goes to pattern no. 1, drum set no. 2 goes to pattern no. 2 because it gets real confusing if you start having pattern no. 1 calling drum set 34 or whatever.

So that's basically the way that the drum sets and the patterns relate, however you should also remember that when you call up a new pattern you automatically call up a new drum set with this kind of protocol.

#### 34.17 Set Mode

Now you may not want that you may want to set up a drum set and then try out a bunch of different patterns to see how it sounds with them. Every time you call up a pattern it recalls the previous drum set, how do you get around that?

Well there's a file page on the drum set menu, if you go past the save page, which is page 8. You have a choice between set mode to "pattern" or "manual". In manual mode, what that means is whatever drum kit you have set up on these pads is gonna stay that way, regardless of what pattern you call up. So what probably happened in the music store is that someone had it set to manual and neglected to set it back to pattern. So no matter which pattern you picked up it was always the same thing and that was the problem.

So all you have to do is switch it over to pattern mode and you're right back with the patterns being assigned to the proper presets. So that's easy. You will find that that's a useful feature though because there are times when you want to try out a kit with different patterns.

#### 35.23 Backup

So that's it for all the set up functions. Probably the next thing to do is talk about backup.

*Boy I tell you I'm guilty of not backing up patterns and working all night on a couple of songs, writing some patterns and then my data gets dumped and I waste all that time.*

I cannot tell you how many musicians don't backup their data and they should never trust a micro processor. You never know what can happen it's not that there's a problem with the product. You're walking along the road, it's a cold winter day, it's

dry and you touch the thing and give it a couple of thousand volts of static electricity. You're probably not gonna kill it but you might scramble its memory, do something like that or you could accidentally erase a pattern when you're in a frenzy of creativity or whatever.

What I always recommend is backup whenever you have something you'd hate to lose. You know you really have to backup regularly.

### 36.18 Tape Interface

*Yeah but you know I don't really like tap backups.*

I don't think anybody does.

*They're just very cumbersome.*

I know they're cumbersome, you have to get the levels set right and all that. There is a tape interface on the SR-16 and it does a real good job. It's a reliable tape interface. Let me just give you a couple of hints about tape interfaces if you need to use that.

First of all always use certified data cassettes. Audio cassettes are great for recording audio, they're not real good for recording data. Data cassettes are real good for recording data, they're not real good for recording audio. The most important thing about a cassette that you use for cassette interfaces is that it does not have drop outs. You can afford to lose a few milliseconds of sound when you're listening to a recording but a few milliseconds of data is death to these things. So always use a certified data cassette.

There are some cassette recorders that are designed specifically for data storage and saving and loading like Radioshack and people like that make them. They are in fact more reliable than audio decks generally and they're more fool proof. But audio decks work fine surprisingly cheap decks work really well because you don't need a lot of high frequency response, they have a limiter built in because it's intended to be used for voice applications. The data always come in at a consistent level, you don't have to be so paranoid about setting levels and all that stuff. So if you use the right kind of machine with the right kind of tape, practice setting the levels. What I usually do is I turn the level down to the point where it loses the data and starts going crazy and turn it up until it starts losing the data because it starts to overload and set it at exactly the halfway point and 99 times out of a 100 that will be the correct level. Once you have that level you leave it set there and you're fine with tape stuff.

### 38.14 Sys Ex Dump with DataDisk

But there is an easier way and that's using MIDI system exclusive backup. It's also more flexible because you can save in just a fraction of a second without having to hook up all the cassette stuff as long as your MIDI cables are connected to your MIDI Sys Ex backup device. You can just save a drum set to disk or save an entire set of patterns or whatever. What I sue to backup stuff is the datadisk, the Alesis datadisk. It's a very simple device although it has a lot of features that I find particularly useful. One is that it will take extremely long system exclusive dumps and that's not an issue so much with the SR-16 but with a lot of synthesisers that are putting out dumps of 100K or 200K, a lot of other system exclusive devices can't store that.

The thing about system exclusive is that it's faster than tape and it's also more reliable generally speaking. What system exclusive does is it takes all the patch data, or whatever portion you select of patch data, converts it into code that can be read as MIDI data and from there it gets stored on disk. Of course, because it's on disk if you have some great set of data and your friend has a datadisk you can just bring a disk and load all the stuff then you don't have to carry a drum set around with you and so on.

So let's investigate how to do sys ex backup with the datadisk. I think that will solve your problems.

*Wonderful.*

Well the first thing we need to do is make sure that everything's hooked up properly but it's real simple. The MIDI Out from the SR-16 goes to the MIDI In on the datadisk and the MIDI Out from the datadisk goes to the MIDI In on the SR-16.

*Very simple.*

Can't ask for more than that. It just so happens I have a floppy disk here that's already formatted for the datadisk so I can just put it in. If it's not a formatted disk you can just press the format button and it would ask if I want to do this, you press yes and it's formatted.

So once we have the disk in there what we want it to do is we want the datadisk to receive the system exclusive information so there's this button that says "receive". Sounds like a good try doesn't it? So you press receive it says "checking disk" and "waiting for data". So now what we need to do is send the data from the SR-16.

What we have here is a back up button, the only button we haven't touched so far. So let's touch that one and we call up the backup menu and the very first option is send out MIDI. Because they know that most of these people are gonna be hip and save this stuff to disk instead of messing around with cassette interface. So it's right there ready to go.

To send out to MIDI all you have to do is press play. Now two things will happen. This will say that it's sending data out, this will be receiving data but it's a very fast process so don't blink. OK now it's received the file – the datadisk has received the file. If I wanted to name it and go through all that stuff we could but to save time we know that it's in there.

*You would name it on the datadisk?*

Yeah on the datadisk, so if you saved like 40 different drum sets or patterns or whatever they can all have individual names and I should mention by the way that you can also save individual patterns to the datadisk or to another SR-16. In fact if you have a friend with another SR-16 you can just do a dump from one directly to another and just avoid the step of going through the datadisk. But you can save just drum sets to the data disk so you can build up a collection of hundreds of drum sets if you want or individual patterns. You can even take the individual rhythm of a particular pad and save it to the datadisk and bring that into another file at some point. But you'll have to read the manual for all that stuff.

*I'll have to do it one of these days.*

So now we have the file in there and normally what you would do is name it and save it to disk and all that jazz. What we'll do is I'll show you how to send it back its real simple. You don't have to set up the SR-16 to receive sys ex data. Like most MIDI devices that receive sys ex data as soon as it sees something saying there's sys ex intended for the device it will just go and grab it immediately. So what we need to do here is press send so it spits back the file we put in there and it says, "Send File Alesis File 01?" So I guess do yes is the next logical thing to do. Now watch the display on the SR-16 and while it's sending the data the SR-16 will show that it's been received. Just like that and now all the data has been put back into the SR-16.

Now I saved everything, that's the drum sets, the patterns, the songs, the whole deal and you saw how fast that was. You don't have to worry about setting levels or anything it's all just MIDIfied and ready to go.

*That would save me a lot of time in lost patterns.*

The thing is with backup is you've got to make it as simple as possible or you won't do it. People who use 80 floppies to back up a hard disk soon discover they should go out and get another hard disk or a SyQuest removable or something because. I never backed up my hard disk when you had to do it with floppies because it was just so time consuming. Actually I've used the datadisk for a lot of other applications because it will take the long sys ex dumps it's real convenient. So that's definitely the fastest and easiest way to do it but there is all the tape stuff to if you wanna do that.

## **Conclusion**

So that pretty much covers all the major features. Do you have any more questions about it?

*No you covered most of it actually all of it you covered. What I've discovered about this thing is that its great for the guy like me who wants to trigger drum sounds in a live application or write patterns from here (drumKat) if I want to and it's great for the single musician at a nightclub or something, at a bar, at a lounge who wants to really get a good feel for his songs and not just be stuck to the same old pattern over and over again repeating.*

*You can add a lot of feeling in there and have footswitch control and really make his gig work out real well.*

You know the one thing I want to emphasise is that it really is worth checking out things like the footswitches and practising with it. There are a lot of features in here. You can't expect to learn a machine like this in a day or even a week. I'm sure that months from now you'll be finding out little fine points about things you can do that maybe aren't in the manual or that other people don't even know you can do. There's all kinds of applications for the saving of patterns for example. I could easily see that some day people will be selling datadisks with hundreds of patterns for your SR-16 or something like that. You just don't know where it can lead.

So it's worth getting to know these things, you know play with them, play with the MIDI note mapping assignment and it'll keep you busy for a while there's an awful lot going on in this little box.

*Well great thanks for helping me out.*

Well good luck, go cut a great demo!

transcribed by Stephen Lindsay from May to July 2007 at Dundee, Scotland