



# YAMAHA

## POWER USER

### MUSIC PRODUCTION and PERFORMANCE With the MOTIF ES

#### REAL TIME LOOP REMIX

##### **A Word on REAL TIME LOOP REMIX**

Mastering this unique tool, originally developed for the RS7000 Music Production Studio, can bring you closer to permanently ending writer's block. Real Time Loop Remix is as close as a product has come yet to a "talent button". Seriously...we laugh about this but think of it this way: When you hire a musician to play drums, guitar or bass in your band you want them to bring something special to that role. You often encourage them to add their own ideas to yours and bring some life into the music. Real Time Loop Remix can take MIDI phrase data and restructure it – giving you new and often stunning results – it creates a new MIDI phrase. It is like handing a chart to a real good player – one who can take your idea and offer you variations on your theme. If you don't fully understand the concept of the Pattern Phrase – this feature will bring it into clearer focus. Each Phrase, which is defined as any recording on a Pattern Section track, can be associated with a sound and can be used as a building block. The Pattern PATCH function – allows you to mix and match Phrases.

A Motif ES' Pattern Phrase controls the playback of audio. The SLICE function can take any audio loop (up to 8 measure in length) and divide it into timed segments. These sliced segments are mapped to the MIDI keyboard and are played back by a chromatic scale that reassembles the audio phrase by playing them one after the other – in a similar fashion to how single pictures can animate a cartoon. The Real Time Loop Remix takes the controlling MIDI phrase and like a magical musical Quisnart™, spins the phrase into a new one, which has the effect of rearranging the audio clip. Since the Real Time Loop Remix is rearranging the MIDI data it will work on any Pattern Phrase. There are 687

Drum Phrases in the Motif ES Pattern Phrase Library – there are 1,280 Remix algorithms – there are an untold number of sampled phrase data available...the possibilities are truly endless. You can Remix the Remix, and then Remix it again. If you have ever attempted, manually, what this does automatically (you will want to sue somebody to get those days back) you will appreciate how fast and easy this function makes manipulating audio data. Manually cutting samples into slices can be hours, days, even weeks of work...and then rearranging them into some kind of musical meaningful phrase... Yikes!!! The Motif ES does this in real time!!! It was designed to work on audio drum loops, but as you will quickly see, it can be used on any MIDI Pattern Phrase with unbelievably great results. This is probably one of the most compelling tools for creating "new" from "old", "cool" from "lame", "awesome" from the "mediocre". Does it always come up with something useable – well, no! That's your job to tell it when it has and when it hasn't – you play producer. Included with this file is a simple drum loop to experiment with... Slice it and then Real Time Loop Remix it. Have fun!

In order to import this wave and work with the SLICE function you will need to add DIMMs expansion RAM to your Motif ES. Although, as the article mentions, you can use Real Time Loop Remix on non-audio data, to get its **full effect** sampled audio loops are necessary.

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## Real Time Loop Remix

This function gives you a variety of semi-random presets (1,280 in all) for dividing the MIDI sequence data and altering the note positions and note lengths, letting you create completely new variations of a Pattern. This function is particularly effective when applied to a track that contains a sample voice created by using the Sampling feature with the SLICE+SEQ sample type or samples processed using the Sample SLICE Job. But can be applied to any MIDI phrase whether or not it is a user sliced sample.

Set up the parameters (outlined below), and then press the [ENTER] button to execute the Remix operation. You can press the Play button at this point to hear the results of the Remix. If you're not satisfied with the results, try another Type/Variation and press [ENTER]. If you want to keep the changes, press [SF5] OK. (Undo cannot be used with Remix<sup>1</sup>.) To return to the original display without altering the data, press the [SF4] CANCEL button.

Since the remixed data is stored as a new phrase and assigned to the current track, the original phrase data remains as an unassigned phrase. For example, if you record a simple drum groove in User Phrase 001, if you press ENTER to REMIX the phrase and then press [SF5] OK, the Remix will create a new User Phrase in the lowest numbered empty User Phrase location - i.e., User 002. It will automatically "Patch" this new Phrase into the Section, leaving the original Phrase (usr:001) unassigned but available if you need to recall it. Each new Phrase that you CREATE is added to your library of User Phrases. You can have a maximum of 256 User Phrases per Pattern Style.

**Type** Determines how the data in the selected track will be divided and rearranged. The division and rearrangement rules are different for each remix type. The type is also shown graphically in the display and gives a general idea of where the activity is concentrated. Settings: 1~16

**Variation** Determines how the original MIDI sequence data will be modified.

Settings: Normal 1~16, Reverse 1~16, Break 1~16, Pitch 1~16, Roll 1~16

- **Normal 1~16**.... The original data is only divided and rearranged. 16 variations are provided.
- **Reverse 1~16** ...In addition to division and rearrangement, some portions of the data may be played in reverse (if, and only if

<sup>1</sup> User Phrase are added to your library for the current Pattern Style. Up to 256 User Phrase can exist per Pattern Style. You can simply delete phrases as necessary.

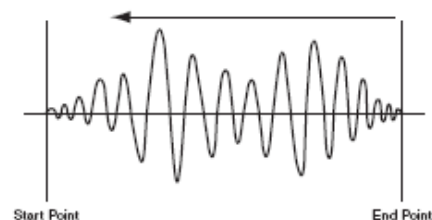
applied to a sliced user sample phrase). 16 variations are provided.

- **Break 1~16** ...In addition to division and rearrangement, some portions of the data may be deleted to create breaks. 16 variations are provided.
- **Pitch 1~16**...In addition to division and rearrangement, some portions of the data may be pitch-shifted (if, and only if applied to a sliced user sample phrase). 16 variations are provided.
- **Roll 1~16**.....In addition to division and rearrangement, some portions of the data may be played with a roll effect. 16 variations are provided.



Each combination of TYPE and VARIATION will give a consistent result when applied to the same data. In other words, if you apply TYPE 1, VARIATION NORMAL 1 to the exact same phrase – the result will be exactly the same each time. Therefore, you can count on the results if ever you need to return. Applied to different data of course, the results will be different – like when applied to a variation of the original phrase – but each time applied to the same data, the results will be predictable.

Reverse and Pitch Variations apply to sliced sample segments. When these are applied to regular MIDI phrases, do not expect to hear reverse or pitch changes (that is reserved for MIDI data controlling sliced audio only). You will hear different timing and note length changes however.



When you apply the Reverse or Pitch variations to a sliced phrase, it will alter the sample waveforms by either reversing playback of certain segments<sup>2</sup> or offsetting the original pitch of certain segments. These are destructive edits. You can go to INTEGRATED SAMPLING → EDIT → [F1] Keybank and view each individual segment of the audio phrase and tweak each one, as

<sup>2</sup> Reverse is actually the unit reading the wave from End point to Start point rather than the normal way.

necessary...even manually edit the Pitch or Play Mode (direction) of each segment if you wish to make changes.



This is great because every now and then you REMIX a phrase and it gets really, really close to the 'perfect' phrase but you want to change just a few of the events. Knowing how the Reverse and Pitch works on samples can be a valuable tool. See the section on Things to Try later in this article for more details on editing individual slices.

Although primarily developed for sliced rhythm loops this REMIX function can be used to great advantage with absolutely *any* type of phrase data. For example, you can use the Motif ES arpeggiator to "paint" a track with a Phrase, perhaps a bass line (recording it to a Pattern track), then send that Phrase into the REAL TIME LOOP REMIX algorithm and twist it into half a dozen variations. It will use the notes of the Phrase but change their timing and position, making a related phrase that can be auditioned against the rest of the tracks. Once a new Phrase is created it in turn can be REMIXED again and again – there is no limit to the number of times you can alter the notes. All this can happen in real time, making the Phrase Factory concept a fabulous tool for creating new tracks.

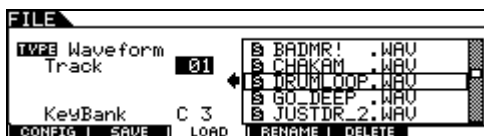
#### Import and Slice an audio loop:

Load the drum loop wave called "DRUMLOOP.wav" to track 1 of an empty pattern.

- Press FILE
- Select the "Waveform" type



- Highlight the "DRUMLOOP.wav" and press [ENTER]. Point it to track 1, note C3



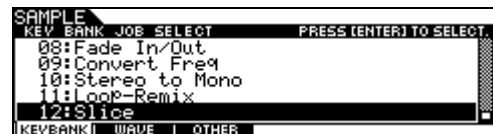
- Press ENTER/YES to execute the import  
Press C3 and listen to the audio of this loop (okay if it not your cup of tea bear with it and follow along). This imports the wave to the track – but it has no MIDI data to trigger it, yet.



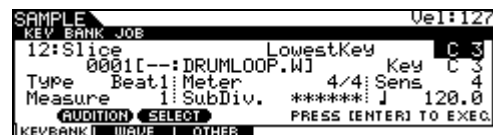
When you import a sample or create an original sample in a Song or a Pattern the Motif ES will place this audio into a special Voice bank 63/50 – above you can see the sample (.wav) that we imported is in Part 1, Voice 1 of this special bank.

What you need to tell the sequencer, since it can't 'know', is how many measures this audio phrase is. Once it knows that it can divide it into musically relevant segments. Let's SLICE it – this will create the MIDI data to trigger the sample.

- Press INTEGRATED SAMPLING
- Press JOB
- Press F1 Keybank
- Scroll down to JOB #12 SLICE and press ENTER



- Set the parameters as follows:

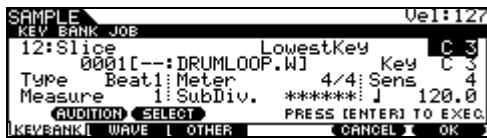


- Press ENTER to execute

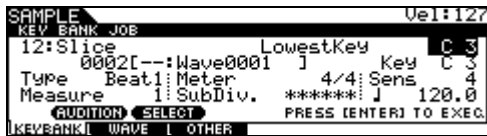
It will take a few seconds to analyze the waveform. By selecting the BEAT 1 type we have asked the technology to analyze where there are peaks of audio and to create a sliced segment based on the Sensitivity setting. Sensitivity affects how many slices it makes. Each audio segment (slice) will be triggered by a precisely timed MIDI event that will be placed on the track.

Before you accept the results, you can AUDITION if with SF1 and by playing each sliced note on the keyboard. Hold down the AUDITION button and try it at various tempos. Slice has created a chromatic scale of notes that it 'plays' to reassemble the waveform. This is why you can adjust the tempo without the "pitch change" penalty (at least over an amazing range of tempos. Now, just because it is working from the AUDITION button does not mean you want to keep it. Also verify each slice by playing each note going up the keyboard starting at the "Lowest Key", note C3. Here you will find out if it actually created too many slices or too few slices. It is important to understand that when it does this, you need to set the SENSITIVITY lower (for less

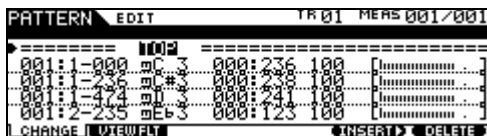
slices). It is important to test your results with both methods available.



Press F6 OK to keep the results or press F6 CANCEL to discard the results and try a new sensitivity setting. The higher the sensitivity – the more slices it creates, the lower the sensitivity the fewer slices it creates. The SLICE function will now create a new waveform (002[---:Wave0001 ])

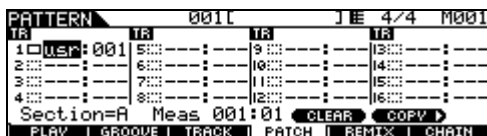


It also creates a User Phrase – precisely timed chromatic events to reconstruct the audio phrase:



It will “Patch” this user Phrase into the Section grid.

- Press PATTERN to return to the main Pattern screen.
  - Press F4 to view the PATCH setup up
- Your new User Phrase usr:001 is placed on track 1



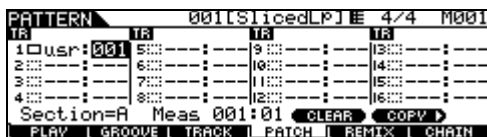
Press JOB

Press F4 PHRASE

Scroll down to Job #09 Phrase Name

Name it “SlicedLp” or something appropriate. The name appears on the top line when the phrase is highlighted. Also notice that the phrase time signature and length are also shown:

User Phrase:001 “[SlicedLp]”; 4/4 time; one measure in length.



Now that we have an audio drum loop that is sliced properly and we have a named MIDI phrase to play it back patched to the Section, let's create

some variations using the REAL TIME LOOP REMIX function.

- Return the main Pattern screen
- Press PLAY [>]. You can adjust the tempo now without the pitch change penalty.
- Press F5 REMIX



How the remix works:

Each time you select a TYPE and VARIATION and then press ENTER, the REAL TIME LOOP REMIX function will alter the data. “CANCEL” and “OK” appear above SF4 and SF5 respectively, allowing you to reset or accept the results. If you accept, a new user phrase is created and will be “patched” to the Section grid. If you “Cancel” the original data returns and the Patch remains the same.

TYPE: 1-16 – the higher the number the more complex

VARIATION: Normal, Reverse, Break, Pitch and Roll.

- Normal refers to play direction of the audio sample
- \*Reverse will play certain of the sliced audio segments backwards by flipping the waveform around
- Break will gate certain of the segments by making the MIDI event a staccato note.
- \*Pitch will alter the Original Key parameter of certain keybanks (slices) so that it will sound at an altered tone.
- Roll will play certain of the segments in a drum roll fashion.

\*The Reverse and Pitch Variations will only be affective on sampled audio – if applied to normal MIDI event phrases although the timing and position of events will change you will not (strictly speaking) hear reverse notes or pitch changes.



## Things to try

Use the PATCH function to recall a Preset Drum groove. There are 687 preset drum grooves:

DR1:001 ~ DR1:227

DR2:001 ~ DR2:181

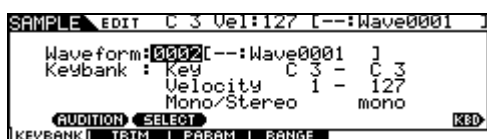
DR3:001 ~ DR3:162

DR4:001 ~ DR4:117

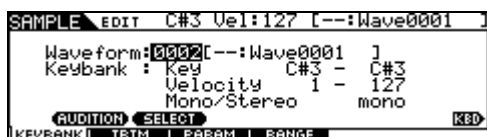
Try applying any of the TYPE/VARIATIONS to them. If you get something that you like, ‘create’ it as a User Phrase by pressing SF5 OK. In this

manner you can create your own drum fills, breaks etc. Do not be afraid to try it on any kind of MIDI data, although originally conceived for use with audio sampled drum loops, you will find it very affective on everything from bass lines to horn riffs to clav parts. Remember it uses the notes that you have played so it will always be in key. The MIDI phrases that it creates can be used as is, or you can further edit, append, split, copy and/or paste them, as necessary.

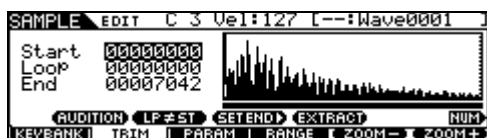
Editing the individual Slices: Once an audio waveform has been sliced, it is divided into several time segments and a MIDI note based on when that segment occurs is placed in a MIDI Phrase. Below is a series of screens shots showing our audio wave after it has been sliced. A new Waveform 0002 has been created and mapped chromatically from C3. The first segment is shown below. It is mapped to key C3:



By holding the [INFORMATION] button (labeled "KBD" in the lower right corner of the screen) and touching note C#3 you can recall the next slice in the chromatic map:



As each Keybank is selected and recalled via this method, you can use the F2, F3 and F4 buttons to view its data: F2 view/edit the wave, F3 set Play Mode parameters and F4 change the key/velocity range of each segment.



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