Yamaha RS7000
Live Performance Howto

collected and written by Timo A. Hummel

Version 0.2

Thursday, November 7, 2002

Disclaimer

This document was collected and written by Timo A. Hummel. All trademarks within this document are property of their respective owners. All information within this document is intellectual property, unless mentioned otherwise.

This document has the purpose to serve as a source for your own ideas. Therefore, I cannot take any liability if you damage your music equipment, your toaster, or your cat. I also don't take any liability that the information within this document is working as specified.

The purpose of this document is to make the Yamaha RS7000 Product more popular, shows much of the flexibilities, and to fascinate more and more users – no illegal activity and/or damage to Yamaha is intended.

New versions of this document can be found on http://www.monday-rec.com/rs7000

I can be reached at timo.hummel@gmx.net. If you have contributions to this document, or if you have found false information, just drop me a line.

1 Introduction

Welcome to the Rs7000 Live Performance Howto. I hope you enjoy reading it and use the tips and tricks you find in there. All this is free of charge, however, if you find these hints, tips and the document as whole useful, you are encouraged to send me a CD of your live sets (preferably detroit techno style), or book me if you like to. Feedback with not-so-nice points or invalid hints is also nice to have. Have fun!

1.1 Motivation

The reason why I wrote this is to publish my tips and tricks to the RS7000 User world and the idea to get feedback from other people using the RS7000 in their live sets.

1.2 About me

My name is Timo A. Hummel. I use the RS7000 in my live performance to make people dance on the ceiling (almost). My philosophy when playing live is to have control over many aspects of my live performance, and it is also my philosophy which forbids me to just press play and the whole performance plays on its own. In my live performances, when I don't do anything, then nothing will happen. I hope many RS7000 owners share this philosophy and make use of this document.

1.3 Topics covered

Some of the topics covered in this document aren't that much RS7000 specific, but are more ideas how to organize and create a live performance with the ability to have full control over what's happening.

The chapter 2 is dedicated to some basic live performance techniques I use in my own performances.

In chapter 2.1, I'll try to explain the goals for the chapter "Getting Started".

In chapter 2.2, I'll try to explain some of the RS7000 operating modes and why everything else than the pattern mode is evil in the context of live performances.

In chapter 2.3, I'll try to explain how to organize the pieces of information (like phrases and tracks) and how to get direct access during the live performance.

In chapter 2.4, I'll try to explain how to integrate the RS7000 into the live equipment setup, including using the RS7000 master effect with all devices you've got.

Currently, there are only chapters 1 and 2, which will change in the future (chapter 3 will most probably contain information how to prepare and pre-arrange live performances in the studio).

2 Getting started

I hope this isn't your first session using the Yamaha RS7000, if it is, please stop reading now and use some other tutorials on the web and/or the Yamaha RS7000 operation manual. I assume that you know how to perform basic tasks and jobs, and that you are able to find menu entries on your own.

2.1 Goals

In this chapter, you learn how to organize your patterns for quick'n'dirty access on the stage without loosing all control possibilities, as well as what a good track layout looks like.

Additionally, you learn how to integrate the RS7000 with your exisiting equipment to create a killer-live-performance(tm).

2.2 The RS7000 Operating Modes

You should already know the 3 RS7000 operating modes, which are named "Pattern", "Pattern Chain" and "Song". You cannot switch between them while the box is running, so it is important that you choose one first.

Usually, live performances for electronic music don't have pauses inbetween, so it's important to find a way to organize all your stuff so you can really have a performance which takes 45 minutes, one hour, or even more.

2.2.1 Pattern Mode

The Pattern mode is the most basic mode, depending on the point of view. From the point of view from a live performer, it is the most powerful mode since the performer has full control over every aspect. There is nothing which happens automatically during playback which isn't in the phrases, so there are no automatical tempo, pattern and section changes. Live means that somebody has to do something in order to create sound changes.

2.2.2 Pattern Chain Mode

The pattern chain mode has some automatism in it, you can program section and style changes. That's one step away from performing live. Imagine the following situation:

You notice that your audience likes a specific sound a lot, and you want to use that sound at a later point of your performance. Since the pattern chain is fixed, you can't step back without interrupting the sound.

Additionally, the pattern chain mode is limited to 999 measures, which is **way** too short for many live performances (at 140 BPM, this makes around 20-30 Minutes of playback).

2.2.3 Song Mode

The song mode is the "let's-automate-it-all" mode. If you use this mode, I won't call you a live performancer anymore. Of course, this mode is very nice to create songs which you maybe want to release later, but this mode is nonsense for a live performance. Let's quickly forget it :)

2.2.4 Pattern vs. Pattern Chain Mode

Using a pattern chain, you are fixed to a specific arrangement of your live performace. This is bad, as already said above – and we want to have full control, don't we?

To change phrases, you have to interact with the RS7000. Press the pattern button twice, you'll see the Patch view. In this view, you can switch your phrases during performance. Select the Track of which you want to change the phrase, and turn the knob 2 to select the phrase (see "Information Management" for how to organize your phrases). Since abrupt changes are bad in most electronic styles, it is very nice since you can smoothly advance from one song to the next, just by exchanging the 16 tracks (or less) step-by-step. You can access the Patch view from every other view just by pressing the Pattern button twice. Remember: If you are stuck in any view, just press exit until you see the main overview again. From there, just press "Pattern" once and you are in the patch view.

2.2.5 Pattern vs. Song Mode

The same which applied to the pattern chain mode applies to the song mode – and additionally.

2.3 Information Management

In order to play a perfect performance, you have to kill a few braincells before you climb onto the stage for the information management. You already know that there are phrases, but usually, you didn't change them or used sections to switch them (or even the pattern chain/song mode).

2.3.1 Phrases

One big problem on the RS7000 is that switching styles causes a little (but still noticeable) delay since it switches the effects unit. Another problem (which isn't directly RS7000 related) is that when you switch sections, that all phrases are switched. So why don't we just setup one huge section which contains all stuff we need? 256 phrases should be enough for one live performance, and you can put other (different) live performances into other sections/styles, maybe with a single sound that bypasses both sections. Using this technique, you could create a live-performance which can last half a day – and that should really be enough.

2.3.1.1 Organizing the phrases

I usually split my live performance into several tracks, and I organize my patterns after a specific schema. You have to know that I have set a dedicated track for each part of my songs – since it is possible to use 256 phrases and 16 tracks, I decided that I have a maximum of 16 songs. In my live performance, I used the following track layout:

Track	Contents	Short name
1	Bass Drum	BD
2	Hihat Closed	CH
3	Hihat Open	OH
4	Snare	SN
5	Claps	CP
6	Ride Cymbal 1	RC1
7	Ride Cymbal 2	RC2
8	Bass	BA
9	Lead	LD
10	Strings	ST
11	Loop 1 / Efx 1	LP1
12	Loop 2 / Efx 2	LP2
13	Loop 3 / Efx 3	LP3
14	Loop 4 / Efx 4	LP4
15	Aux 1	AUX1
16	Aux 2	AUX2

As you can see, each track has a dedicated "Instrument" which it plays. Therefore, it is very easy to split up the 256 phrases into chunks of 16 tracks. For example, the Bass Drum of Track 1 is on Phrase 1, the Bass Drum of Track 2 is on Phrase 2, the closed Highhat of Track 1 is on Phrase 17, the closed Highhat of Track 2 is on Phrase 18 and so on. You can

download an excel sheet so you can easily manage your patterns.

I hope you understood the concept, since it makes it possible to switch phrases track-by-track and without skipping too many phrases (which costs a lot of time).

2.3.1.2 Phrase naming

In order to get the concept of the stuff above, it is important that you name your phrases. I used the short names of the tracks to identify the phrases. Example:

001 bdaud
002 bdflip

"aud" and "flip" are short names for the songs I've made. Since phrase names are limited to 8 characters, they have to be very short.

2.3.1.3 The TESA hints

To have a full overview over my tracks, I attached some tesa (transparent tape) below the 16 knobs of the RS7000 and wrote the track shortcuts on it. It's not a big deal, but it's nice if you are nervous on stage and want additional security.

2.3.2 Knob assignment

Almost every knob on the RS7000 can be assigned to other functions, including track assignment.

2.3.2.1 Assigning knobs for mixing

In my live performance, I use the effect send knobs for setting the volume of lp1-lp4, and the EG knobs for the cutoff of lp1-lp4. You can set the knobs to what you like, just what you need.

2.3.2.2 The label hints

To make life easier, just attach some white sticky labels to the RS7000 (make sure you can detach them easily) and write the new knob function below it. Makes your live life a lot easier!

2.3.3 Live Equipment Integration

If you have other equipment, you might want to integrate that also into the live performance. Read on!

2.3.3.1 MIDI Cabling

The Yamaha RS7000 has two dedicated MIDI output ports, but unfortunately, you are limited to the 16 tracks. In my live performance, I've set track 15 to a dedicated MIDI A track and track 16 to a dedicated MIDI B track. You can change these using the setup button, and you can also apply the phrase change technique I've explained above.

2.3.3.2 Audio Cabling

To get the best results, turn the audio colume to 100% and set the gain on your mixer correctly. High-quality cables are a must (but that applies to every device in your setup). No tricks, just straight-forward cabling.

2.3.3.3 Using the RS7000 as insert device

Sometimes, you surely want to use the master effects of the RS7000 with all your devices. If your mixer has master insert plugs, you are out of trouble, since you can just insert the whole mixer signal into your RS7000 (audio in), and then use the regular audio outs to return to the mixer. A wiring diagram follows soon!

2.3.3.4 Mastering Chain

Using the trick above, you can also use mastering effects. In my live performance, the audio signal coming out of the RS7000 is inserted into a BOSS VFX-1 (which does EQ, Compression etc) and a delay unit. The output of the delay unit (last device in the chain) is returned to the mixer – and bingo, there's great sound.