

MULTI-TRACKING ON THE YAMAHA CVP309

A method used by Ray Shaw

Introduction

As the 16 track sequencer on the Yamaha CVP309 piano is generic to the most recent Yamaha keyboard instruments, I thought it would be useful & informative to other Yamaha keyboard enthusiasts if I documented my approach to the task of multi-tracking a piece of music.

Whilst I am no technical expert & the first to admit that I have not fully grasped all of the functionality the on-board sequencer & supporting features have to offer, my approach is probably somewhat unorthodox to the traditional methods that have been adopted. Saying this however, I'm sure my method of multi-tracking could be enhanced & improved if I was more familiar with the additional technical features provided on the keyboard. All of this aside, this is how I multi-track for which the results are more than satisfactory to me.

In the past, people I have spoken to who use Yamaha keyboard instruments or in deed keyboards from other manufacturers, & who utilise the on board sequencer for multi-tracking purposes, seem to adopt the method whereby a voice is assigned to a track & this particular voice or instrument is fixed to that track for the duration of the piece. Personally I do not have a problem with this approach but one could encounter problems if more voices were required for which there were available tracks. This is where the Yamaha sequencer is unique & for me provides the two most important features that allow a user to carry out his or her task of recording an entire piece of music that appears seamless when complete. They are:

- 1. A voice does not have to be assigned to a particular track for the duration of the song. The user can record any voice or instrument in real time on any track at any particular point in time during the song.**
- 2. Where an automatic style is used, the user can stop-start the rhythm at any point during the song with seamless results. This allows the user to record a piece in real time & build it up stage by stage.**

To date, I've recorded some 28 arrangements & compositions using my method of multi-tracking & all but one have been recorded using the Yamaha sequencer. You can listen to extracts from my own compositions & also my arrangements in full, by accessing the Home Page on this website & clicking on to "Ray's Work".

This document goes on to briefly explain how I prepare & execute the recording of a piece of music using what I consider to be a very user-friendly method that requires only a basic knowledge of the keyboard sequencer mechanism.

Planning & Approach

First & foremost, I record everything in real time. As mentioned above in the introduction, one of the main features of the Yamaha sequencer is the facility to be able to use any voice on any track throughout the duration of the song.

During the process of recording various voices on different tracks, it is imperative that you keep some kind of log to document each of the entries so that you have a complete up to date picture of what has been recorded as well as being able to see what space has been utilised & what space is free. To do this, I use an Excel spreadsheet that I have produced & customised to capture all the necessary data.

An example of the spreadsheet log can be seen in the diagram below. The layout is reasonably straightforward. It lists each of the tracks from 1 to 16 down the left hand side & the columns on the right represent each measure of the song as it is played. I have only shown one page with measures up to & including 30. The spreadsheets I normally use have measures going up to 250 covering 8 pages in total.

Song Title																														
MEASURES →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Track 01 Right 1																														
Track 02 Left Hand																														
Track 03 Right 2																														
Track 04																														
Track 05																														
Track 06																														
Track 07																														
Track 08																														
Track 09																														
Track 10																														
Track 11																														
Track 12																														
Track 13																														
Track 14																														
Track 15																														
Track 16																														

Completing the spreadsheet can either be on the computer as you carry out your multi-tracking activity (PC or laptop would need to be next to keyboard instrument) or you can use a hard copy of the log with a pencil to manually capture the information.

The first 8 tracks refer to the normal recording tracks for the voices or instruments whilst tracks 9 to 16 refer to the automatic style section if it is used. If the automatic style section is not required during the song the user then has another 8 tracks at his or her disposal.

The only other thing to mention in relation to the spreadsheet is that Tracks 1 to 3 have specific references i.e. Track 1 (Right 1), Track 2 (Left Hand) & Track 3 (Right 2). This becomes apparent if you assign a voice to Right 1, Right 2 and the Left Hand, press record and start playing. The voices you have assigned to these functions will automatically default to Tracks 1, 2 & 3. To further enhance your song by utilising other tracks available (Track 2 is self-explanatory), you must ensure that you assign Right 1 or Right 2 to the track you are recording on (say for example 4 to 8), after pressing the record button.

Note: I am assuming that the user is familiar with the Yamaha sequencer & multi-tracking in general. This document does not explain how the sequencer itself operates. Please refer to your manual for this.

Preparation requires choosing the song & deciding how you are going to arrange it, or if it is an original composition, again, you will have planned out how the piece will need to be arranged before you play it. Once you are mindful of this & you have the spreadsheet log ready, the actual operation of carrying out the task of multi-tracking can commence.

Method & Operation

The first task is to put the name of the song at the top of the log. When adding data to the log, if you are using a hard copy I would suggest using a pencil so that you can make amendments where necessary.

As for completing the log, it is quite straightforward. Whichever voice you choose to use & whichever track you decide to record it to, ensure this is transcribed correctly to match what you have put into the sequencer. Gradually you will be building up your arrangement or composition & visually you will have a picture of what you have done as well as immediately seeing what space is free for further additions.

Similarly, if you later decide you are not happy with a particular voice you have recorded you can pinpoint the measure & the track involved using the log & delete or overwrite it.

Each separate voice recorded on the tracks is a phrase of music that I refer to as a “section”. See illustration below.

Song Title																											
MEASURES ▸	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47				
Track 01 Right 1							Grand Piano																				
Track 02 Left Hand	Strings																										
Track 03 Right 2							Strings																				
Track 04				Tenor Saxophone									Strings														
Track 05							Tenor Saxophone																				
Track 06															Strings												
Track 07															Grand Piano												
Track 08	Timpani													Strings													
Track 09																											
Track 10																											
Track 11																											
Track 12	Automatic Style																										
Track 13																											
Track 14																											
Track 15																											
Track 16																											

Each section i.e. “Grand Piano”, “Tenor Saxophone”, “Strings” etc, is clearly defined starting at one measure & finishing at another. For example the “Grand Piano” examples above start at measures 31 & 36 & end at measures 41 & 46 respectively.

As mentioned before, with this method, you are not assigning a particular voice to a track for the duration of the song. Although the above diagram is a hypothetical example, it does illustrate that you can play any instrument on any track at any part of the song e.g. Track 4 displays both Tenor Saxophone & Strings.

One of the benefits of using this method is that after playing back the finished product, if there is something else you want to add, this can be put on any track providing the particular measures in question where you want to record the new section have not been fully used up on all tracks.

Also, I often use two separate tracks with the same instrument to record a tricky or difficult part of the song. For example, if the part in question covered around, say 20 measures of continuous piano playing, I would break it up into probably 3 separate sections – see illustration below. By doing this I would play the first section on the first track & get it right. I would then set the sequencer to record about 3 measures back from the end of the 1st section so that when I start recording the 2nd section, I can hear the end of the 1st section and I'll know when to come in for the 2nd. For the 3rd section, I set the sequencer to record about 3 measures from the end of the 2nd section so that when I start recording the 3rd section, I can hear the end of the 2nd section and I'll know when to come in for the 3rd. Finally, when complete, you will have the continuous piano part recorded over two tracks. The thick black line in the diagram below illustrates this. It can take a few attempts to get each of the sections right & the purists among us would say this is cheating, but as far as I'm concerned, the functionality is there to utilise as you see fit & if your task can be made any easier then it has to be an option. Also, you will want the finished product to sound acceptable to the listener especially if you are committing it to CD.

MEASURES →	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47							
Track 01 Right 1																														
Track 02 Left Hand																														
Track 03 Right 2																														
Track 04	1st section										2nd section										3rd section									
Track 05	1st section										2nd section										3rd section									
Track 06																														
Track 07																														
Track 08																														

3rd section starts 3 measures back from the end of 2nd section

1st section

3rd section

2nd section

2nd section starts 3 measures back from the end of 1st section

Note:
 The thick black line is the continuous piano part broken into 3 sections over 2 tracks

Moving on, the second main feature I referred to in the introduction was the facility to stop & start the automatic style at any point of the recording. This is extremely useful as it allows you to build up the song in stages. Some sequencers only allow you to complete a recording in real time in one take. This is a huge constraint. The Yamaha functionality eases the burden of trying to get it right first time so for me, this is probably the most useful bit of functionality the sequencer has to offer.

To try & demonstrate my recording approach using an automatic style, I would tackle a standard song in stages as follows:

1. I would always have my spreadsheet recording log ready to document all the recording activity.
2. First of all I would concentrate on recording the introduction only, using Tracks 9 to 16. This I would call Stage 1. At this point in time I'm not worried about what comes after the intro. Normally I don't use the built-in intros but if I do, I sometimes like to mix them about & maybe add one or two of the fill-ins here or there. By just focusing on the intro you can plan exactly how you want it to sound & you can concentrate on getting it right. Once the automatic style of the introduction stage is recorded & I'm happy with it, I'll play & record the chosen voices over the top using any of the Tracks 1 to 8. Once I'm happy with the finished sound I'll then move on to the next stage. At this point I could have spent hours on the introduction alone but the message to get across is get it right!

3. Say for example the intro ends at Measure 30. My next task is to record the next stage of the song continuing from where I left off. To do this, I place the measure back to a convenient point before 30, say 27 & reset Tracks 9 to 16 to the "record" position. Note, the measure you choose to restart, in this case 27, will refer to a particular chord, say E flat. By setting the sequencer to record as soon as you play a chord of E flat in the left hand at Measure 27, the style will play on the first beat of the bar allowing the song to continue until I decide to stop at a convenient point. At this point I will have now added the next recorded section that follows on seamlessly from the introduction. As with Stage 1, I would then concentrate on recording the chosen voices on any of Tracks 1 to 8 & getting this right before moving on to the next stage.
4. I would repeat this approach with careful thought & preparation until the song is complete & I am happy with the finished product when played back. I always play back my finished songs about 2 or 3 times before I'm totally satisfied. For some reason I always seem to find something else to add to enhance the sound!

The number of stages depends on the complexity & length of the piece of music you are recording. It is entirely up to you how you break the piece up to work on. At relevant points in the song you may want to move the key up or down a ½ tone or you may want to stop the style somewhere in the middle of the song to play unaccompanied without a rhythm & then re-introduce the style later on in the song. Also, you may want to add fill-ins and where applicable lay voices over these as well.

Conclusions

I've applied this approach from day 1 and I've always been happy with the end result. As you can see, I don't tend to use a lot of the technical features the keyboard has to offer to tidy up the finished product i.e. applying the "quantize" function, adjusting volume levels of instruments or tempo etc, probably because of 2 reasons. Firstly, I'm not fully up to speed on how they operate and secondly, I tend to convince myself that I don't think I need them because to my ear I'm content with what I have produced.

Saying this, I'm certain that my recordings would benefit from some onboard technical assistance following their completion and this is something I need to consider at some point in time.

Anyway, whichever method you apply to your multi-tracking activities, whether it is strictly by the manual or something on the lines of the above, good luck and enjoy.

Ray Shaw
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