



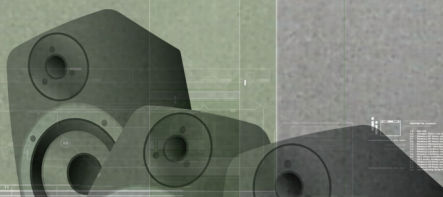
CONCEPTS IN


AUDIO

ENGINEERING



JIM STALLINGS & DANIEL MIXER





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The background of the entire page is a faded, light gray architectural drawing. It features various geometric shapes, lines, and text elements typical of a technical drawing, such as dimensions (e.g., 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100), a circular element in the top left, and some illegible text fragments like "09-19-5" and "009".

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INTRODUCTION

This book is organized around the workflow of a project from idea to completion. It will serve as our guide through the process involved in creating an audio realization of an idea. Dive into the process with the materials available and the skills you have. Learn the essentials for making a good recording. Follow your project through to completion.

You build your experience and sharpen your skills by successfully completing a project and moving on, rather than tweaking one project past the point of a reasonable return. Each successive project will build upon the foundation of the skills and experience gained from the previous project.

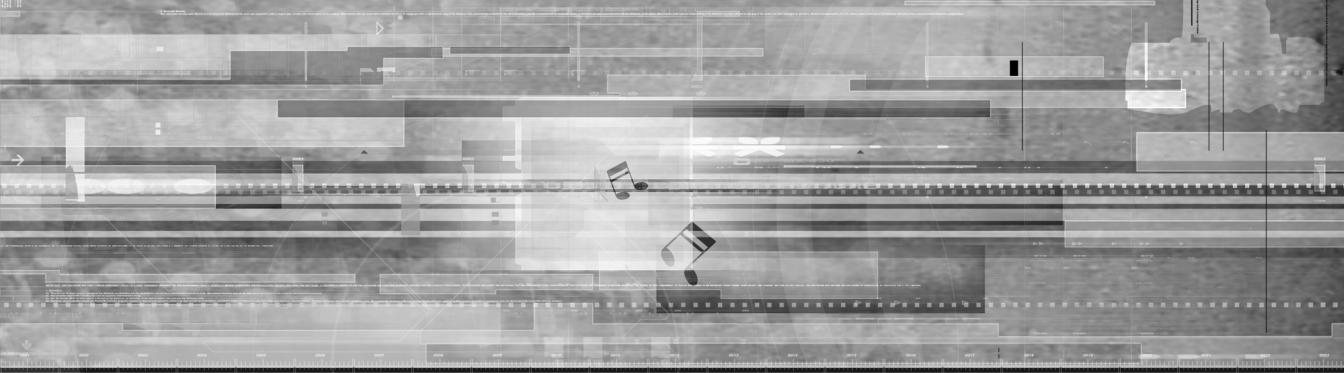
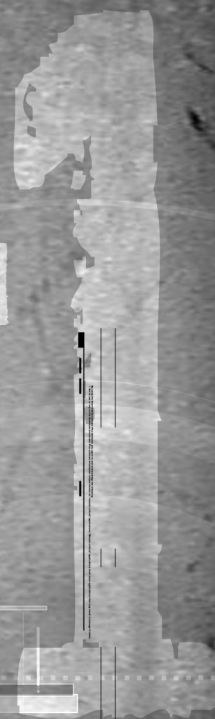
The process itself is about making informed decisions and moving on. By understanding the workflow, doing the required planning, keeping good notes, and paying attention to the details, you'll arrive at the successful completion of your project, ready to move on to the next.



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SECTION

PROJECT CONCEPT



PROJECT CONCEPT & ORGANIZATION

Taking a project from an idea to a completed recording is a three step process. It's important to understand the steps and set markers along the way to track your progress.

The **first step** is developing the concept of the project and organizing your workflow. A great idea will always remain only a great idea unless you see it through to its realization. The majority of people get stuck and stop here. You must be able to conceptualize and organize your project in order to check the feasibility of accomplishing your goal. **This is your first progress marker.** Once you have an idea and have formalized your goal, look at what is required to accomplish it. Is it reasonable? If not, make adjustments, or choose another idea. For example: if you have an idea for writing a two-hour-long symphony to be performed by the BBC Orchestra and recorded in your living room, you may need to adjust it, unless you have an enormous house and access to lots of money and the BBC orchestra. If that happens to be a passion of yours, then put it on the wall where you can see it every day and make progress toward it over the next 10 years. However, for the immediate project, scale it down and begin by taking on a smaller project, perhaps for a string quartet that can be recorded in your space with a reasonable budget by local musicians. Once you have completed a successful small project, it's easier to move on to bigger and more ambitious ones. Many prospective artists and composers crash and burn here because they shoot for the stars, but won't travel to the moon.

Once you have a feasible, well planned, and well organized project, you can move on to **step two**—recording. You'll know when you're ready for this when:

- * **You have a concise project goal with a detailed plan.**
- * **You are well organized.**
- * **Recording dates have been set with everyone including the engineer, the musicians, and the studio.**
- * **You and the engineer have discussed the recording schedule with goals for each session.**
- * **The music is ready for the performers and they have rehearsed their parts.**

The potential pitfall here is to lose track of the overall goal of the project and allow it to mushroom into a huge, lumbering beast with no definition or direction. **THIS IS WHY THE FIRST STEP IS SO IMPORTANT.** You have to know where you are going in order to know when you have arrived. The important thing here is not to move into this phase too early. Be sure that all of your planning and preparation work is done before you set foot in the studio to record. Recording is not the end goal—it's only one step in the process.

After all of the recording is complete, you're ready to move on to **step three**—mixing. This is where the various sounds and performances you've recorded are combined into a single recorded performance ready for others to hear. Again, if you've successfully completed steps one and two, this step will have a clear beginning, and you'll be able to carry your initial concept through to completion. The pitfall in this step is to mix the project to death. Start with a clear idea of where you're headed, and when you arrive, stop. Don't keep circling the block. Remember that this is not your only project; it's only your first. By now you'll have many ideas for possible projects to follow. Get this one mixed, in the can, and move on. It's important to note that this is a recording meant for others to hear. At some point you have to turn it loose and let others enjoy.

CHOOSING THE PROJECT

Your first project should involve recording one instrument or voice at a time around one of these concepts:

**TWO OR MORE ACOUSTIC INSTRUMENTS ALONE, OR
ONE OR MORE VOICE PARTS WITH AT LEAST ONE INSTRUMENT.**

To ensure a good foundation for understanding the process, it's best to avoid complex recording situations such as drum sets and groups of performers for your first project. It's also best to avoid "location recording." Keep the variables to a minimum. All of the recording and mixing should take place within the studio space with which you are becoming familiar.

Begin by formulating your initial concept. Write a simple statement of what the outcome of the project will be. After you have defined the goal, check the feasibility of the project by considering these factors:



- * What instruments/vocals are involved in the project?
- * What is the availability of competent performers?
- * What is the availability of the instruments to be used?
- * Will the instruments work in the recording space available?

ORGANIZING THE PROJECT

UNDERSTANDING COLLABORATION:

THE ROLE OF THE COMPOSER, ARRANGER, ENGINEER AND TALENT

The composer of the music is the one who creates the initial concept, writing the melodies and basic harmonic structure for the project. In the case of a work involving voices, the composer may also provide the text, or may collaborate with a lyricist. He/she may also contribute to or provide the arrangement, as in the case of a classical work involving a full written score. If not, the project will require an arranger, whose job it is to provide the individual parts for the various musicians, based on the composer's idea and intent. The composer (and the lyricist) will normally be the one(s) who initially hold the copyright to the work with the arranger providing the arrangement for a contracted fee. One exception would be in the case of a work for hire, where the writer/composer is paid a contracted amount for the work undertaken. In this case usually the one contracting the work holds the copyright.

The engineer is the person responsible for collecting the sounds, storing them (along with adequate backups), and later combining the tracks into a final "mix." Depending on the scope and budget of a project there may be several engineers—one for recording, one for mixing, and one for mastering. There also may be assistant engineers to take care of record-keeping, initial set up, etc.

The people referred to as *talent* are those musicians, singers and sound designers who will translate the composer's ideas into sound.

Any combination of these duties can be performed by the same person or shared by a combination of people. Since many of these duties overlap, and individual responsibilities change from project to project, it's important that everyone understands their role in the process. It's also important that each person's compensation is understood ahead of time, and that they are paid on time.

UNDERSTANDING RECORD KEEPING:

The project will need to include **detailed** logs and records. The importance of this can't be overstressed, both for the current project at hand, and for laying a foundation to build upon. All record keeping should be done immediately and not saved up for later. The patches, tweaks, client hours, and studio setup which seem so obvious at the moment will be quickly forgotten within a day or a few hours. Your record keeping should include:

COMPLETE STUDIO TIME LOGS INCLUDING CLIENT AND ARTIST RECORDS.

It's good to get in the habit of keeping studio time records from the beginning. In the future, you'll need these to correctly bill your client and adequately pay your performers. Your logs should include complete contact information for your primary client, the artist, the producer, the musicians, and any others associated with the making of the recording. For each recording session, you'll need to log the start and end times for the overall session, each of the musicians, assistant engineers, and any others that you may be paying, whether by an hourly or a session fee. This information will not only serve as a history of who did what and help with billing and pay-out, but will serve as the beginnings of your industry contacts list for future networking.

INCOME/EXPENSE LOGS SHOWING ALL INCOME AND EXPENSES.

The log should show the date of each payment/expense associated with the project, a description of who paid, the nature of the expense incurred, and the amount. You'll also need a receipt for each expense incurred. When it comes down to who pays for what, it's best to keep in mind an important business rule: **"If you don't have a receipt you don't have a billable expense."**



TIP: For ease of record keeping, use a spreadsheet on your computer. List all income to the project as a positive number and all expenses for the project as a negative number. You can then use an auto summing cell to keep track of the column totals. This way, it will be easy to keep the client updated on incurred expenses, and will help you track how far you're extending credit.

PROJECT RECORDS AND STUDIO SETUP INCLUDING PROJECT RESOLUTION AND A COMPLETE TRACK LIST.

In addition, each session will require detailed track information sheets containing all setup information such as routing, external processing, instruments, amps, synth patches and settings, and the name of the musician who played on the track. These records will prove invaluable should you ever need to re-create a particular track or should you wish to use the same type of setup or the same musician on another project in the future.

* For sample forms that will help you get started with your record-keeping, flip over to the Appendix (page 181).



TIP: Whenever possible, you should keep a copy of the synthesizer's (or other digital device's) configuration by downloading the data into a file on your computer. When using a virtual instrument inside Cubase®, this can be done by simply saving the patch. In the future, should you need or want to recreate the patch you worked for hours to perfect, you can instantly restore it by a simple upload to the piece of gear or Cubase® track.



A word of caution however—usually, an upload to an external device will replace the existing memory and configuration settings of a particular unit. Don't upload until you have double checked that you are ready to do so and have backed up the unit's current settings. When a device's settings are overwritten, they cease to exist—there is no recall. The old settings, if they can be reconstructed, may take hours or days to reprogram, potentially causing a huge error with no undo function.