

THE DIY INTERNET RADIO COOKBOOK

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A BEGINNER'S GUIDE TO BUILDING
YOUR OWN 24/7 STREAMING RADIO
NETWORK

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First Edition

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Introduction

It's no secret that the way we consume media has changed dramatically over the past 20 years, and radio has undergone perhaps more change than any other single medium. The way it is created, delivered and consumed has experienced paradigm-changing shifts, one of which is that it's now possible for anyone to create quality programming and make it available to a global audience. Gone are the days when it took an exorbitant amount of capital to purchase expensive professional broadcasting equipment, get licensed by the FCC, hire a staff of radio professionals to run the operation and a sales team to sell advertising to keep the venture solvent

Today, streaming radio on the Internet has allowed the independent media producer to do an end-run around FCC licensing, and digital technologies provide producers with all the tools they need to create a fully-functional radio station, complete with automation protocols. Of course, there are still legal concerns to consider - like music licensing to ensure you're not violating copyright laws with your broadcasts - but overall, the prospect of starting a streaming station with tens of thousands of listeners is well within reach of any ambitious independent radio producer with a basic knowledge of web technologies.

Before we jump in, I want to be very clear that I didn't start out as an expert on any of this - and to a large degree, I'm still not. I was the person that I imagine you are, someone with the drive to create great programming for my community and make it available to a

worldwide audience. My problem was that I didn't have a lot of money to spend, so I needed to find a way to create it on a shoestring. Surely, I thought, there must be a book or a manual I can buy to guide me through the process, but there just didn't seem to be much out there. No books on Amazon, no convenient "How to Set Up a 24/7 Streaming Internet Station" how-to websites, no podcasts - nothing. I spent many late nights Googling up a storm and finally realized that, barring professional automation equipment that can cost a fortune, I'd have to get a bit creative and use what *was* available to cobble together something that did what I needed it to do. For three months I experimented, trying lots of things and failing at most, but in the end I was able to use technologies that were either free or very inexpensive to set up a system that would be able to handle around-the-clock programming and allow our hosts to easily create content, both live and pre-programmed. The goal of this book is to save you those hundreds of hours of blood, sweat and tears, the late nights experimenting with solutions and failing over and over again, and provide you with the tools that I wish had been available to me while I was building my station.

The book is arranged in what I consider to be a "logical" order, meaning that the chapters come in the order that I think you'll need them. Inside, you'll find tips and solutions for:

- Goal setting - In order to have a successful operation of any kind or size, it's important to understand exactly what you're trying to accomplish. Understanding this early on will be a huge help in determining how to build your radio station.
- Finding a company to host your audio streams, so your computer and Internet connection are relieved of the heavy lifting. I think you'll be surprised at how low a price you can pay for quality audio streaming.

- Creating a studio and obtaining the necessary hardware. Whether you're broadcasting from your living room or have a designated studio space, you will need some basic hardware to get the job done. At the bare minimum, you'll need a microphone, a computer, and an Internet connection, and I'll provide you with guidance on how to set these up for broadcasting. If you're looking to set up a fully equipped studio space, you may wish to add mixer boards, guest microphones, CD players, turntables or other equipment. I'll give you advice on the types of equipment you might need, as well as how to find them without spending a fortune.
- Broadcasting software: In order to get your signal out to the world, you'll also need designated software for encoding your signal into the correct format for your server, and sending that signal out to the world. This chapter will cover available options - some free, others very inexpensive - for reliable broadcasting.
- Your station's website: Any Internet radio station needs a website, not only as a destination for online listening, but as a way to promote your programming and distribute your content. This chapter will be a case study of my station's website, and will hopefully provide you with some good ideas for yours as well.
- Automation: This is the most difficult aspect for the net radio entrepreneur on a shoestring, but don't despair! There ARE ways to create a fully functional automation system on a shoestring, and one that will work not only with your streaming content, but for automatically updating your website as well. In this chapter I'll share the tools I used

to do just that.

- **Music licensing:** The difficult reality of any radio station that broadcasts music is that, in order to stay compliant with the law, you must pay licensing fees for the music you play. This doesn't have to be a bank-breaking prospect, however, so in this chapter I'll provide advice on staying legal without going broke.
- **Distributing your content:** One of the great things about broadcasting in the 21st century is that your content can have a long life after its original broadcast. There are literally dozens of ways to get your radio content "out there" using your website, iTunes radio, radio apps, and by partnering with audio-content third party sites. This chapter will provide you with some tools to make sure your content continues to get listeners long after it first airs.
- **Promoting your station:** Any Internet radio station needs listeners in order to become successful. This chapter will provide you with some DIY strategies to promote your station and make sure listeners around the world are tuning in to your shows.
- **Appendix - Resources:** Finally, a comprehensive appendix at the end of the book will provide links to all the resources mentioned one place, for easy reference.

Please bear in mind as you go through this book that the solutions presented here worked for me to meet my goals, but may require some adjusting for your particular situation. For example, I work exclusively with Macintosh computers so some of the software I use may not work if you use only PCs. However, I've found that any piece of software that is platform-specific usually has a counterpart

for alternative platforms. Wherever possible, I will provide links to several potentially useful solutions, and hopefully you will find one or more of them useful.

This book, like my radio station - Radio Free Brooklyn (RFB) - is a labor of love. It is designed to help the independent radio producer on a limited budget with a way to get something up and running fairly quickly. However, we all know how quickly technologies can change, so I invite you to sign up for updates to this book at my website: <http://www.radiocookbook.com>. Signing up with your email address will allow me to contact you when there are new developments affecting this book's content, and to give you the first look at new chapters that may be added before they go to print.

Should you have any questions about anything in this book - or suggestions on how to make it better - please feel free to email me at any time. My email address is tom@radiofreebrooklyn.com and I'd be happy to give you any help you need to get your station off the ground. I hope you find the help you're looking for within these pages. Best of luck to you and your Internet radio venture!

Chapter 1

Starting Out – Seven Important Questions To Ask Yourself

Before undertaking the task of building an online radio station, one of the most important preparatory steps you can take is *establishing goals* for your network. Doing this early will be a huge help as you're building your station and making decisions about what tools you need and how much to spend. With each decision you make along the way, asking yourself “*will this help me achieve my goals for the station?*” allows you to choose a strategy/tool/protocol that is the best one for getting to where you want to be.

In my two decades working in digital media, I've seen too many people embark on building a website or online community simply because websites or communities seemed to be popular, but without giving much thought to how it would serve their brand. Before you start building your radio station, you need to realize that it's hard work, and ask yourself some key questions about why, exactly, you're doing this. Some of the questions you should ask yourself are:

Question 1: What is it you're actually trying to accomplish?

Is your goal artistic expression, or is your main objective to make money? These two goals are not mutually exclusive, but under-

standing where you place your priorities will be of great assistance when deciding how you build your station.

Question 2: How much programming would you like to provide when you launch your station?

Do you want a station that only broadcasts a few shows a week, or do you want one that broadcasts around the clock, 24 hours a day, 7 days a week? Answering this question will help you to determine exactly how much automation you'll need to have when you launch.

Question 3: What's the format of your station?

The concept of *programming formats* is almost as old as radio itself. Simply put, it describes the kind of content your station will provide. Some of the most common radio formats include:

- News/Talk
- Classic Rock
- Country Music
- Adult Contemporary (music targeted to adults over 30)
- Electronic Dance Music
- Religious programming
- Urban/Hip-Hop
- World Music
- Freeform

At RFB, we decided to adopt the *freeform* format, which was pioneered in the 1970s by radio hosts like Steve Post and stations like New Jersey's WFMU and New York's WBAI. In a nutshell, freeform means that the station doesn't have an "official" format to which hosts and DJs must adhere. Instead, the hosts are given a time

slot with which they can do whatever they like (within reason, of course.) Both my partner and I have backgrounds in running live performance spaces in NYC, and assign great value to giving artists free rein to create according to their own individual aesthetic. As a result of our decision to go freeform, we have a station with an eclectic mix of music, comedy, talk, and even a live sports show that takes calls from listeners. We realize that freeform is not for everyone - in fact, one of its downsides is that it's *not* for everyone, and someone listening to their favorite show on our station may not like the following show, and may tune out. However, having decided early in the process that we didn't want to place format restrictions on our hosts, and to give priority to artistic expression, this is a pitfall that we're willing to accept.

Question 4: Will you broadcast live shows, pre-programmed shows, or a combination of both?

Clearly, this is an important question to answer as the tools you'll need will differ depending on whether your shows are live or pre-programmed. There's nothing like live radio, and having live shows is likely to attract more listeners. It also provides more opportunity for community involvement, as it's fairly simple to set up your studio to accept live call-ins. However, live broadcasts require things like a place to broadcast from, live broadcasting equipment, and a layer of management over your studio facilities and your hosts that you will have to deal to a lesser degree if you simply air pre-programmed shows.

Question 5: Will your station make money, or is it exclusively a "labor of love?"

One of the most difficult challenges for anyone launching a media venture of any kind is determining how to keep that venture financially sustainable. Since this book focuses on building your station,

and one could fill an entire book on moneymaking strategies (in fact, many have, and I list some of these books in the “Resources” section at the end of the book), I won’t delve too deeply into this aspect of the station. Nonetheless, it’s still an important question to consider. At RFB, we’ve made it a priority to keep the station “commercial-free,” meaning that we don’t sell advertising to just anyone who wants to buy airtime on our network. Instead, we rely on ancillary strategies to bring money in. Some of these include:

- **Live events.** This is a great opportunity, particularly for music-oriented radio stations. At RFB, we plan on hosting quarterly music showcases in our home neighborhood of Bushwick and in other neighborhoods around the borough of Brooklyn. Normally, bars with stages and sound systems can be procured in exchange for a guarantee that the bar will bring in a certain amount of money in gross receipts. Provided you’re confident that you can bring in the audiences, this can be a great deal for producers since you can charge a cover fee and keep everything you earn at the door. Furthermore, it’s fairly simple matter to bring along a laptop and a small mixer board and set up a broadcasting station so you can broadcast the event live to your listeners. Selecting bands with large followings will help bring people in the door, and if you’re willing to offer your bands a percentage of the door based on who comes to see them, the musicians are further incentivized to encourage their fans to attend the show.
- **Donations:** This is a fairly straightforward strategy, but one that won’t necessarily bring the big bucks, at least not right away. However, it’s still worth it to have a place on your website for listeners to donate to your station if they like what they hear and want to contribute to the cause.

One way that we incentive listeners to donate to RFB is to offer premiums to those who offer recurring donations. For example, if a listener pledges to donate \$5 per month - an amount that most people won't even notice when it's deducted from their bank account - they receive a free t-shirt. At \$5 per month, the t-shirt is paid for after a couple of months, and everything on top of that is gravy. Five dollars a month may seem like small beans, but if you get just 20 people contributing that amount, you're looking at \$100 per month - enough to pay for a significant portion of your operation.

- **Merchandise.** One of the truly beautiful things about this digital, on-demand age in which we live is that you don't have to lay out a huge amount of money up front in order to offer custom products to your listeners. At RFB, we were able to integrate our online store (which sells t-shirts, tank tops, tote bags, sweatshirts and mugs) with a company in California that receives orders directly from our store, prints the items and fulfills them for us - all at a very reasonable price. By doing this, we don't have to worry about things like managing inventory, upfront printing costs for items that may or may not sell, sending things out, or dealing with any fulfillment issues - it's all handled for us! Additionally, the company we use, Printful (described in more detail in Chapter 9), has such reasonable prices that we're able to mark up our merchandise so that we make at least \$5-12 for every sale. We've also found that merchandise tends to sell very well at live events, and when we have an event we'll order enough merchandise from the vendor, at our discounted rate, in order to have inventory on hand at the event.

- **Live broadcasting for other organizations.** One of the great things about having your own Internet radio station is that you have a means of communicating with large amounts of people at a time - which is something that most organizations *don't* have. This can be used to your advantage, and is a way to potentially bring money into your network. Let's say, for example, that a local bar is having a music event that they would like to have broadcast to the world. As I mentioned in the "Live events" bullet above, it's a fairly easy matter for you to bring in some basic equipment to a bar with a sound system and get set up to broadcast remotely from the event. Not only is this a service that the event's organizers will pay you for, it's also great for your station as it will bring awareness of your network to perhaps thousands of people who may not have heard of you. You get paid, the organization gets their event blasted to listeners around the world, and you reap further benefits in increased listenership. It's win/win all around.
- **Media partnerships.** If you're fortunate enough to live in a large urban area, there will be a myriad of festivals and other cultural events happening in your city at any given time. Why not contact some of the organizers of these events and propose a partnership wherein your station will either live broadcast some of their events or, at the very least, have artists from their events appear on your station for interviews promoting the event? This is an offer that most cultural institutions, particularly the smaller ones, will find difficult to refuse. When starting out with this strategy, it's best not to ask for money, but to instead enter into a mutually beneficial relationship in which they agree to plaster your station's logo all over their programs, posters, and other promotional materials, and you agree to promote

and/or broadcast their event. At the very least, this will gain your station some much-needed exposure, and after you've got a few smaller events under your belt, you'll be well-positioned to go after larger, national events who will be willing to pay for such partnerships.

- **Audio and podcast services.** Even if you didn't start out as an audio professional, starting and running an Internet radio station will allow you to develop skills in producing audio that most people, other than professional audio engineers, don't have. One revenue stream we've developed at RFB is offering audio production and post-production services to individuals and organizations that are seeking to develop their own audio content. Since NPR launched its *Serial* podcast in 2014, podcasting has experienced an explosion of popularity and more and more people are trying to get into the game. If you've got your own studio and equipment, why not offer to rent them out to those who might not have the same resources? At RFB, we offer services that range from podcast recording, to post-production (editing) and distribution at rates starting at \$50 per hour. We advertise these services on our website, and for free using Craigslist.

Question 6: What will you call your station?

This may seem like a trivial matter, but believe me, the name of your station can and will be one of its most important assets and it's best to start considering this question early. A great name won't ensure success, nor will a terrible one guarantee failure, but considering that the name is the very first impression most people will have of your station, try to create something that resonates with them. Serendipitously, as I write this, I just got a *New York*

Times news alert that Google is restructuring its organization under a parent company called Alphabet. According to the article, Google co-founder Larry Page said, “We liked the name Alphabet because it means a collection of letters that represent language, one of humanity’s most important innovations, and is the core of how we index with Google search.” Clearly, Google put a lot of thought and consideration into the choice of their name, and chose one that is not only memorable, but that resonates with the core of who they are as a company. We chose the name Radio Free Brooklyn because we felt it would strike a chord with listeners on a number of levels, such as a) community - having Brooklyn in the name communicates that we are a Brooklyn-centric community organization; b) history - Radio Free Brooklyn has echoes of historic radio stations such as *Radio Free Europe*, which was created in 1949 as a way to broadcast messages of freedom into totalitarian regimes. This historic connection also reflects who we are in that we see ourselves as representing a “counterculture” of media artists who are struggling for artistic freedom in a media landscape that is increasingly governed by corporate interests; and c) utility - it’s got “radio” right there in the name so there should be no question about what it is we do.

Question 7: What makes my station different?

There are literally thousands of Internet radio stations currently broadcasting, and more are added every day. While streaming audio is still a relatively young technology, the costs of getting your own station up and running have dropped dramatically in the past few years, and your competition is growing with each passing day. Perhaps the most important question to ask yourself before you get started is: what will make me stand out? To answer this question, you may wish to revisit question one: what are you trying to accomplish? It may be that you want to bring live, call-in radio

shows about cooking and food to the Internet, or Cajun music to your community. The point is that you should be filling a need that is currently not being met, or telling a story that has not yet been heard. Even if your format is 24/7 Electronic Dance Music, think about ways that you can make *your* EDM station different from all the others. You'll be competing with thousands of voices, so make yours unique.

As should now be evident, there are a number of questions you should answer for yourself before you embark on the adventure of building your radio station. They're not easy questions - but important ones. I realize the impulse will be to get started on building your station right away, but if you take your time and consider each of these questions seriously and answer them as honestly and completely as you can, you will be that much better equipped to build what could be a wildly successful Internet radio enterprise.