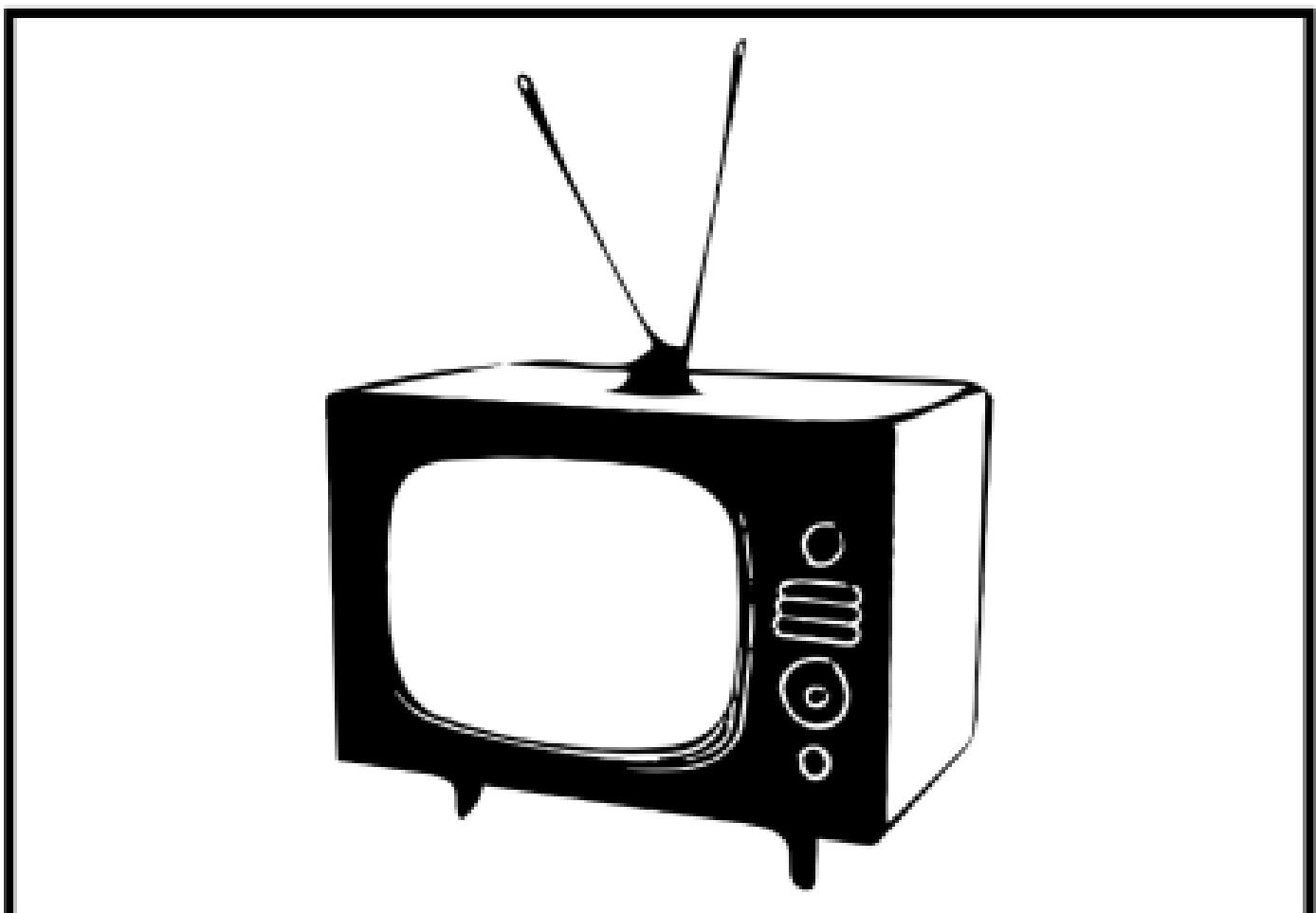


COMMUNITY MEDIA A HANDBOOK FOR REVOLUTIONS in DIGITAL



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Community Media A Handbook for Revolutions in DIY TV

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Chapter 1. Preface

This is the blueprint for a revolution in the creation and distribution of media. We will discuss how and why to produce your own television using free tools, and explore how to use Community Television as an instrument for social change.

This text is divided in to three sections: A manual, a meta-manual, and a look back. These can be consumed in any order.

This text takes a decidedly American approach to history and theory, and while I assume these ideas are applicable elsewhere, I do not have the expertise or knowledge to comment on any place other than the US.

Chapter 2. Introduction

Television is the medium of modern culture. Media theorist Marshall McLuhan famously posited "The Medium is the Message", meaning that the way a message is distributed carries as much weight as the message itself. Since its inception roughly 100 years ago, Television has transformed and reshaped the world but it has been, with limited exception, a read only medium. Many people watch television, but only a very few people make television.

The people who make television, through their access to distribution networks, their copyright monopolies, and their vast budgets, exercise an astounding level of influence in modern society. Elections are won or lost, lives spared or taken, based on the influence of television broadcasts.

And today, the vast majority of these broadcasts come from an ever shrinking number of companies, and they seem most interested in rehashing the same stories again and again. We are not told new stories, we are rarely introduced to new characters. We are given another police procedural or another gritty reboot of a once beloved franchise. We are told this is sufficient.

To paraphrase those who came before us (see History later in this text): The Ecological Landscape of the modern videosphere is incredibly unhealthy. It lacks diversity in creators, in distributors, in distribution mechanisms, and in content.

If Television is the medium of modern culture, and the television ecosystem is unhealthy, what does that say for modern culture? Simply put, until something significant changes, our culture will grow more polarized, extreme, and stagnant.

We can only restore balance and diversity to the ecology of the videosphere by rejecting the status quo of traditional television and building something new. If you've read this far, You are the vanguard of the television revolution.

Our species will survive neither by totally rejecting nor unconditionally embracing technology—but by humanizing it: by allowing people access to the informational tools they need to shape and reassert control over their lives”

— ... Radical Software Vol 1 Issue 1

Chapter 3. A Brief History of DIY TV

There have been many attempts over the last hundred years to democratize, liberate, or otherwise transform the concept of broadcasting and I won't recount them all here, but I want to highlight a couple of key moments and discuss what worked, and what did not work, in each of them.

- Guerrilla Television
- Shot on Video
- Jamming the Media
- Like and Subscribe

3.1. Guerrilla Television

Home video was introduced to the world in August of 1965 by Sony with the Sony CV2400. Prior to the introduction of the CV2400, video was the domain of Professional Broadcasters. Video tape had only existed for about 10 years, and had only been in wide spread use since the late 1950s. Before Video Tape, all video signals were live broadcasts. Before the CV2400, the only option available for Home Movies was film. 8mm and 16mm film produced beautiful images, but shooting on film was expensive, slow, and cumbersome. It had to be developed, cut and spliced, and played back on a projector.



Figure 1. Early Video Camera Operations

he Sony CV2400 changed all that, it was a Video Tape Player and Tape Recorder for home use. It was not portable, and the tapes it made could not really be played back on other VTRs because there was no way

to adjust tracking. It was not a good product, it was not a useful product, and it was (most importantly) not a successful product but, it was a hell of a proof of concept and it was followed up in 1967 with the DV-2400 which included a portable camera and a portable Record-Only Video Tape Recorder. They called this the Video Rover.

The combination of a portable Video Camera and Tape Recorder meant that, for the first time, video could be used in many of the same ways as film for home users. Video looked worse than film, but it had a few points going for it that made it very attractive when compared to film:

1. Immediacy – Things shot on video could be played back the same day! While the DV-2400 did not do playback, a tape could be removed from the DV-2400 and inserted into the CV-2400 immediately (and even that step would be rendered obsolete in future products) compared to the weeks or months it took to get film developed.
2. Price – Video tape cost a lot less than film, could be reused if a shot didn't work out, and didn't require the extra expense of developing film. You could shoot a lot more video than you could film.
3. Runtime – The most common film camera of the 1960s was a mechanical affair, which would run for 30 seconds at a stretch (and it couldn't even record sound!) These early video cameras boasted a battery life in the 45 minute range, and a record time of roughly half an hour per tape.
4. Sound – While it was not impossible to have sound on 8mm or 16mm film, it was remarkably uncommon in the home-movie market. Video cameras enabled Sounds and Pictures at the same time. It seems simple today, but this shifted what it was possible to create outside of a professional setting.

The DV-2400 was followed up with the AV-3400 / AVC-3400, which used the EIAJ-1 standard for cable connections between the camera and other devices, (which **standardized** the EIAJ-1 standard, in fact) and introduced modern conveniences like tracking control, and the ability to record and play back from a single portable unit, which could be connected directly to a television. The standardization of cables and connectors meant that the AVC-3400 could also be used with video mixers, other video tape recorders, other cameras, etc. It meant that Video Gear could be reasonably assured of inter-operation, even when using devices from multiple manufacturers.

This combination of equipment came to be known as a PortaPak. It recorded for half an hour per tape, and would run for 45 minutes on its battery pack. The footage was fine, not remarkable, but usable.

It was relatively affordable, relatively accessible, and way cheaper than shooting on film for any given production. It enabled people to create video and distribute it on a scale that had previously been impossible and, for the first time in the history of television, it appeared poised to transform the Read Only medium into a Read/Write medium.

It was still not perfect, it still had some problems, some significant, but it worked, and it sparked a revolution.

In many ways, that revolution was most visible with the publication of 1971's **Guerrilla Television**, and it is after that text that I have named this section of our history lesson. There's a lot more to say about

Guerrilla Television, and the other early video movements, than could reasonably fit in this text. Perhaps one day I will write a book. In the meantime, I will summarize:

The key principles of **Guerrilla Television** can be summarized as:

- Television is the means by which people come to understand themselves and one another
- Shoot video of things as they happen, don't try and stage a shot or make a movie. It's video vérité – video shot and edited as to provide candid realism – edit as little as possible, don't editorialize.
- Traditional Television is a beast that must be slain in order for our society to be healthy.

Out of this concept of **Guerrilla Television**, a large number of different groups of video producers sprung up. For our purposes, we will examine three of them and explore the ways they approached the transformative power of DIY TV.

3.1.1. New York

The most often talked about groups in the DIY Media scene in New York in the late 60s and the early 70s were the Videofreex, the Raindance Foundation, and Metropolis. We'll touch briefly on Raindance and Metropolis, but the it is the successes and failures of the Videofreex where we'll spend the most time.

The Videofreex were born out of Woodstock. While Michael Wadleigh and his scores of filmographers were shooting the stage at Woodstock, a bunch of attendees were walking around with new PortaPaks (and, occasionally weirder video gear) documenting what things were like on the ground for the attendees. Several of these videographers exchanged information and got together after the concert to see what kinds of trouble they could make.

Officially, they became The Videofreex when they were approached by CBS executive Don West to shoot a video vérité television show about the American counterculture movement (or, to put it another way, they had been hired to point their cameras at things that were happening, and not to edit them too much.) This put them in touch with people like Abbie Hoffman, Fred Hampton, and others, and it resulted in some incredible footage.

CBS, of course, never broadcast the program, and intended to bin it. The 'freex liberated their own tapes, and many are available online today. See the documentary **Here Come the Videofreex** or the book **Subject to Change: Guerrilla Television Revisited** for more information on the formation of the crew and their work with CBS.

Also in NY, a group calling themselves Metropolis was working with Manhattan's public access television network (a predecessor to MNN, the current Manhattan public access network, and the birthplace of some of the most interesting DIY TV of the last 20 years) to shoot concerts at CBGBs. They produced professional looking and sounding footage of incredible concerts, and they distributed them on Television.

While Metropolis was documenting the music scene and the 'freex were working with, and being

disappointed by CBS, the Raindance Foundation was busy working on ***Radical Software***, the magazine of record for the video counter culture. They were heavily influenced and inspired by Stewart Brand's ***Whole Earth Catalog***, Buckminster Fuller's ***Operating Manual for Spaceship Earth***, and the works of Marshall McLuhan. These influences are all over the works that Raindance produced, for better and worse. From this group eventually emerged the handbook for the first video revolution: ***Guerrilla Television***. At their heart was the idea that traditional broadcasting was a scourge that must be eradicated through the judicious application of DIY Video.

Metropolis had distribution. Raindance had a publication. The 'freex had the rug pulled out from under them by CBS. As a result, they took the message of the Raindance Foundation to its logical extreme. They re-branded as The Media Bus, received a 40,000 dollar grant from the state of New York, and moved to a 27 bedroom house in the Catskills where they used a television transmitter "procured" for them by Abbie Hoffman (member of the Chicago 7, author of *Steal This Book*, sometime fugitive from the FBI) to start the nation's first Pirate Television station.

The Videofreex spent the next several years broadcasting from Lanesville, NY, attempting to create a kind of participatory media, in which the residents of their small town became a part of the broadcasts. Through Lanesville TV they pioneered techniques such as eye-witness news, and they built a community. Eventually, they were shut down by changes in FCC regulation and enforcement.

Members of the Videofreex went on to join TTV (see California, below), to work as artists and activists, and to occasionally produce more traditional media. The Videofreex Archive, containing more than 1,500 original tapes, is housed at the Video Data Bank, operated by the Art Institute of Chicago. Much of the archive has been digitized, and some of it is slowly being made available to the public.

3.1.2. California

After writing in *Guerrilla Television* that traditional broadcast media was the enemy, "The Beast", which must be destroyed for the good of the human race, Michael Shamburg (along with Skip Blumberg, and with frequent assistance from other members of the Videofreex) moved to San Francisco and started making documentaries intended for distribution on traditional television.

This was, of course, entirely at odds with their professed values and beliefs and also the best option available to them. Shamburg, in *Guerrilla Television*, proposed a theory of the Ecology of the Videosphere, and lamented the lack of ecological diversity. In *Radical Software*, Shamburg and other members of The Raindance Foundation indicated that they genuinely believed that the FCC was going to enable a distribution mechanism for DIY Video, and their statements about the evils of traditional television as a distribution mechanism were written with that idea at their heart.

Nixon, of course, would do no such thing. Faced with the option to 1) make videos no one would see outside of gallery exhibits, on the single pirate television network in the country, and through mail order catalogs or 2) make videos that would be seen by thousands or tens of thousands of people on traditional television, Shamburg and some others from the NY movement chose distribution.

They founded Top Value Television, or TTV, which produced dozens of award winning documentaries

and, throughout the 1970s, proved to be a major force for social and political commentary in this country. Their work is magnificent: it's produced in a style that was entirely alien to the production techniques of the major players in television in the 60s and 70s. It is disarming, moving, and occasionally deeply unsettling.

The group lasted the longest of any of the video collectives of the 70s, but ultimately fell apart as a result of interpersonal conflict and an ever shrinking supply of funding for the arts.

Shamburg went on to form a production company and has served as the producer on numerous major Hollywood films. He was, in many ways, subsumed in to The Beast he believed he was fighting, but the work he created and/or enabled through TTV continues to shine as an example of the transformative and potentially revolutionary power of video, and the things he and his compatriots wrote in Guerrilla Television and Radical Software form the ideological starting point for this ongoing exploration of the potential transformative power of Television in the modern era.

3.1.3. Appalachia

Insulated from the counterculture movement of the 1960s, and separate from the video collectives of NY and CA, southern Appalachia had their own radical, DIY television movement in the form of Broadside TV.

Broadside TV was a Tennessee based group of Grassroots Video producers working to create local content for the Appalachian region, in the folk school tradition. They were able to operate thanks to the fact that Television was exceptionally difficult to broadcast in the hills of Appalachia, so cable TV was the only way most Appalachians were able to access television. The TVA connected many homes to a cable service, and cable services were required, by FCC mandate, to broadcast at least some Locally Originating material.

Broadside TV stepped in and provided this locally originating material to various Cable operators throughout TN, in exchange for some funding which they used to produce video vérité style documentary footage and explorations of life in Appalachia throughout the region. They would drive from holler to holler exhibiting their work-in-progress footage to the residents of each community they entered, before then asking those residents to contribute their own thoughts on the topic du jour.

Along the way, they also taught people how to produce their own video, provided equipment to underserved communities, and generally did Good Work in an impoverished and unfairly maligned region of the US. Their videos were instrumental in helping Congress decide how to regulate strip mining in the US (see ***"Appalachian Perspective"*** from the Media Burn Archives.)

Ultimately, Broadside TV's success may have been it's undoing. Shortly after their video was used in a Congressional hearing, the FCC under Richard Nixon changed the rules around locally-originating programming. Whether or not this was an intentional attack on Broadside TV, or a less targeted attack aimed at shutting down independent thought more generally, it had the impact of cutting off the major source of funding and the only avenue of distribution available to Broadside TV, and ultimately resulted in their closure.

3.1.4. Successes

The successes of the early DIY TV movement can be largely grouped in to two categories: Theoretical and Practical. From a theoretical standpoint, the Raindance Foundation gave us a framework for exploring independent video through the concept of the ecology of the videosphere, a framework which we can extend to build our new DIY TV movement.

From a practical standpoint, these early video collectives gave us Video:

- The Videofreex interviewed Fred Hampton weeks before the Chicago Police Department murdered him in his own bed, and their conversation presents Fred at his most candid and revolutionary.
- Broadside TV produced documentaries that shaped Congressional hearings and transformed Appalachia
- Lanesville TV pioneered the concept of eye witness news, and built the first truly participatory media landscape
- TTV revealed corruption in the Democratic National Convention, took down a cult leader, and exposed the ugly underbelly of American politics.

And that's just the tip of a deep iceburg. See "Further Watching" for more.

3.1.5. Failures

The biggest contributors to the failure of each of these video collectives came down to distribution and funding, and these twin issues fed on one another. If no one is watching, no one is paying. If no one is paying, nothing new is made. If nothing new is made, there's nothing to watch.

The distribution problem was a technical problem, which has since been obviated in ways that we will discuss later in this text. The spectre of funding still hangs over the DIY media movement, but things are not nearly as dire as they were when the video collectives of the 1970s began to implode.

These early video organizations were also entirely preoccupied with Telling The Truth, with speaking truth to power, with "realizing the potential of video as the driving force of technoaanarchy" or whatever other vague sci-fi technobable they could muster. They were not, usually, concerned with producing entertainment. This was a major failure, because it meant that they spent most of their time talking to people who already agreed with them. (This was not a universal fact: Metropolis, the Videofreex, and Lanesville TV all produced some entertainment, and some of their most successful tapes were intended as entertainment first and sometimes only as entertainment -Talking Heads at CBGBs, Mountain at the NY Pop Festival, the UFO sighting for Lanesville TV- but entertainment was secondary to education, and that limited their potential reach.)

But (possibly more importantly) these organizations also failed as a result of internal contradictions within their worldviews that resulted in an inability to effectively center their values in their work. Guerrilla Television strove to be apolitical, and in doing so they did themselves a disservice. They pursued an individualist approach to solving a problem which will only ever be solved through collective

action. They built a culture in which individuals were elevated above their peers, even as they also worked collectively to implement their solutions. They recognized that the union makes us strong, but they let individual choices and big personalities get in the way of that union.

This internal contradiction, the struggle between collectivism and individual expression, was at the heart of the failures of many of the “opt-out” sects of the 60s and 70s counterculture. **Individualist libertarian ideals are incompatible with building a revolutionary society that can sustain and outlive the individuals within the movement.**

It is not enough for any one person to remove themselves from the influence of mass media. This is not Walden. We are not dropping out. We must, together, build a new path forward for as many people as want to participate.

We are, and must be, politically minded even as we tell stories that are largely apolitical. We will revisit this idea in the Jamming the Media section later in this text.

3.1.6. Further reading

I strongly suggest that anyone interested in this formative period in the DIY TV movement track down digital copies of the Raindance Foundation’s Radical Software, a zine that they published throughout the 1970s. The book [**Guerrilla Television**](#) itself has some interesting things to say, but not enough interesting things to justify the prices that it commands today. If you can find a copy through your local library or [check out a digital copy from the Internet Archive](#), it is an interesting work, but Radical Software is more generally applicable today.

The 1997 text Subject to Change: [**Guerrilla Television Revisited**](#) serves as retrospective an analysis of the movement written and published months before internet video would again transform the landscape of DIY Media. It paints the picture of a failed movement of idealists who compromised or were compromised, but it is the best text on the subject available today.

A few other books, and a few documentaries have also been published in recent years. I have not read all of them yet although this is a living document, I’ll amend it as I read them.

3.1.7. Further Watching

These people weren’t writers, they were video producers. I recommend looking for the following videos:

- [Lanesville TV UFO Sighting on Archive.org](#) and [Mountain Town Video](#)
- [Lanesville TV News Report](#)
- [Videofreex interview Fred Hampton](#)
- [Videofreex Mountain in concert](#)
- [Metropolis Talking Heads at CBGBs](#)
- [Videofreex Mayday Realtime](#)

- [TVTV The world's Largest Television Studio](#)
- [TVTV Lord of the Universe](#)
- [Broadside TV – The Appalachian Perspective – From the Mediaburn Archive](#)
- Any material from Broadside TV that you are able to access (The university of Eeast Tennessee has digitized the majority of [their collection, held in the Archives of Appalachia](#), and will allow access to individual items over the internet by request. This is a Huge pain in the ass, but it is worthwhile to see the techniques this group employed)

More recent Documentary coverage:

- ["Here come the Videofreex" is a documentary about their movement](#)
- ["TVTV: Video Revolutionaries" was released in 2018 and chronicles the rise and fall of TVTV](#)
- ["Videofreex Pirate Television" is a web distributed documentary and an assemblage of clips from the Lanesville TV broadcasts](#)

[Archive.org](#), the [Media Burn archive](#), and the [Video DataBank](#) all have large collections of work from these early video pioneers. Some of this work is freely available, while other parts of this work are very difficult or expensive to obtain.

If you struggle to find any of the above videos, or would like further suggestions, I can be reached @ajroach42@retro.social.

3.2. Shot on Video (DIY in the age of VHS)

As the politically motivated DIY Video Groups faded from the media landscape, another technological and cultural revolution swept across the United States in the form of the video cassette.

The early video pioneers we discussed above used separate Video Cameras and Video Recorders. This enabled a High Degree of flexibility, but it also suggested a need for a crew of at least two people and, while this gear was certainly less cumbersome than the professional gear that proceeded it, it was still somewhat awkward to operate. The late 70s and the early 80s saw the introduction of the Video Cassette and eventually the camcorder (that is to say, a video CAMera and a video tape reCORDER in a single housing.)

Concurrently with the camcorder, the Video Cassette swept the country. The Video Cassette, in the form of the VHS or Betamax tape, brought durable, decent looking, easy to use video tape to the masses (in the same way that the 8-track and eventually the audio cassette had transformed audio tape.) and with it, for the first time, the general public could make a decision about what was shown on their television, and when.

The video cassette brought Time Shifting to the fore, allowing viewers to choose when they watched the things that were broadcast to them. It created the home video market, and the video rental market, spawning a new class of businesses across the globe essentially overnight. It also spawned its share of

lawsuits.

This combination of new avenues for distribution, and even smaller and easier to use video equipment resulted in something unexpected: a boom in independent cinema. Across the globe, dozens of people who were unfamiliar with the theories of Guerrilla Television and video vérité set out to emulate or imitate the things that they had seen on the silver screen.

That such a thing didn't immediately spring out of the first home video revolution may have been a result of technical limitations, but it was also certainly a result of the prevailing attitudes of the culture of early video. Take this excerpt from Radical Software for example:

Global information is the natural enemy of local government, for it reveals the true context in which that government is operating. Global television is directly responsible for the political turmoil that is increasing around the world today. The political establishments sense this and are beginning to react. But it's too late. Television makes it impossible for governments to maintain the illusion of sovereignty and separatism which are essential for their existence. Television is one of the most revolutionary tools in the entire spectrum of technoaarchy.

Television, like the computer, is a sleeping giant. But those who are beginning to use it in revolutionary new ways are very much awake. The first generation of television babies has reached maturity having watched 15,000 hours of television while completing only 10,000 hours of formal education through high school. Yet television itself still has not left the breast of commercial sponsorship. Just as cinema had imitated theater for seventy years, television has imitated cinema imitating theater for twenty years. But the new generation with its transnational interplanetary video consciousness will not tolerate the miniaturized vaudeville that is television as presently employed. We will liberate the media.

To put it another way, the PortaPak made it possible for people to make their own video. The camcorder made it likely that any given person would. It had adoption on an unprecedented scale, and the people who adopted the camcorder did not approach it with the same high minded ideas of technoaarchy that had preoccupied the early video pioneers.

Instead, some of the people who embraced the camcorder and the video cassette decided that video imitating television imitating cinema imitating theater was not only good, but could also be profitable. From this concept, we see the birth of companies like Troma Entertainment which launched the careers

of James Gunn, Trey Stone and Matt Parker, and characters like The Toxic Avenger. It's also from this scene that we find Robert Rodriguez, director of *El Mariachi*, *Spy Kids*, *Machete*, and founder of the El Rey network (although he often shot on film, he edited and distributed his early work on video cassette) among many other independent filmmakers.

For every successful entrant in to the world of DIY Video in the 80s and 90s, there were thirty or forty failures. Movies like *Chickboxer* or *Treasure of the Ninja* which were only ever distributed on hand dubbed VHS tapes out of the trunks of cars or in scattered video stores around the country.

In the VHS era, fully half or more of households in the United States had a camcorder, most homes had a VCR; it was possible to find distribution in video stores, to get your footage in the hands of people who would watch it, and occasionally to make money at it.

But the counterculture of the 60s and 70s had given way to neoconservativism and cynicism in the 80s. Without a movement unifying proponents of DIY TV towards a common goal, without organization, these video creators largely worked in silos. As a result, they found themselves recreating the best and worst of traditional media.

In many ways, video had been democratized! But, outside of the radical and reactionary wing of global right wing politics and American evangelical Christianity, no one knew what to do about it.

And then DVDs became the standard, almost overnight, and the world went once again from read/write to read-only.

3.2.1. Public Access

The 1980s and early 90s, the era of the VHS, also saw a resurgence in Public Access television in the areas that still had Public Access networks. The public access television scene of the VHS era was vibrant, and contained many interesting works. (But, public access was prohibited from editorializing, so your Shot-On-Video scifi film or documentary on the Battle of Blair Mountain might be bookended by the most vile, racist propaganda imaginable, and there was not a thing you could do about it.)

Public Access television was, and is in the few places that it still exists, occasionally wonderful. But it is also flawed and limited in ways that only become obvious when you work within it. It is full of red tape, petty bureaucracy, and the looming threat that everything you create while working with public access can only ever be shown in an entirely non-profit setting, lest you suddenly owe the public access network vast and uncountable sums of money.

Public Access is a half measure that aims to provide democratic and equitable access to broadcasting, but in fact reinforces existing power structures and ideological divides. It wears a veneer of equitable democratization over what is actually anti-democratic equality, falling victim to the paradox of tolerance, while also being plagued with a lack of access for the majority of the people in the US.

3.2.2. successes

The DIY video movement of the VHS era was, economically, fairly successful. Lots of filmmakers launched their careers here. It was not a political or social movement, it was just about telling stories (but stories, as we will later discuss, carry with them the values and beliefs of the storyteller, and in that way this movement was more successful than one might expect).

The VHS era normalized the concept of watching on your own schedule, of watching something different than your neighbors, of seeking out the material that you were most interested in as a viewer. It gave viewers their first taste of Choice, however fleeting.

3.2.3. failures

The goal of the video creators of the VHS era seems to have been, almost exclusively, to become part of the Hollywood system rather than to replace it. They imitated the form and function of traditional media, even when they could not practically afford to do so.

The radical right and evangelical groups took to DIY video in the age of VHS especially well, leading to widespread distribution of conspiracy theories, hateful propaganda, and racist blatherings. The evangelicals produced their own alternate reality of independent media, from Bibleman and Veggietales to more insidious and distasteful things, and they distributed these tapes through their own distribution networks and stores, allowing their movement to grow.

In the era of the VHS tape, the radical right proved that it is easier to get people to rally around hate and the exclusion of an outgroup than it is to get them to stand up for the kinds of radical change that will improve the lives of most people.

3.3. Jamming the Media (DIY in the age of the CD-ROM)

The age of the optical disc was a rough one for DIY Media Enthusiasts, at least until the DVD Burner (or the xvid CD, for the early pirates among you) became common. From the mid-90s to the early 00s, lots of very interesting independent media was being produced (this was, after all, the era that brought us the first podcast!) but very little of it was explicitly video based.

In 1997, Gareth Branwyn – best known for his work with Mondo 2000, BOINGBOING, and [TWiT.tv](#) – published possibly the least well-timed book on New Media that has ever existed. Jamming the Media was published at a time when Internet connectivity was uncommon and slow, digital video was uncommon and slow, and computers (though common) were very slow. It is not explicitly a book about DIY TV, but instead a handbook for all manner of DIY Media, with a specific and explicit focus on zines and music, but with room for various kinds of hypertext and multimedia, and, yes, even video.

In retrospect, it seems obvious that the book was poorly timed. Reading it, though, is an excellent reminder of just how much changed, and how quickly it changed, in the mid-90s. This section is named after Jamming the Media, not because the book was especially influential (I suspect it was, but more of its text is spent documenting what others are doing than providing tips to do it yourself) but because it

was the first text since the original Guerrilla Television that really engaged with the idea that making media was, by itself, a radical act.

Like Guerrilla Television, Jamming the Media proposed media creation as a Radical act, but did not treat it as an inherently political one. There was talk in this manual of ways to use media to create political change, but that was incidental to the core message of the book, and I think that was to its detriment. The act of creating and distributing media is the act of reinforcing your social and political values. To do so without the intent to do so runs the risk of being wildly misunderstood.

Unfortunately, Jamming the Media doesn't mention Guerrilla Television, or any of the alternate video movements of the 70s. By the mid 90s, these things had largely been forgotten. It does talk a lot about Public Access television, and it seems that some really interesting things were happening in that space at that time. (Paper Tiger TV springs to mind as a topic for research if you're interested). Unfortunately, shortly after the publication of the book, Comcast won a court case that effectively shuddered the majority of the remaining Public Access networks in the US. By the mid-2000s, even some of the most influential of them were gone.

This is not to say that there was no other independent media being created in the 90s. In fact, nothing could be further from the truth. The Guerrilla filmmaking techniques of the 80s came in to their own in the 90s, and the rise of Video8, digital8, and miniDV meant ever increasing video quality in ever smaller packaging. This was the era of skateboarding videos, of backyard music videos, of concert footage, birthdays, childbirths, and Christmas mornings. It was the era of video which was shot for reasons no one could clearly define, and then left to rot unwatched in an attic or a basement.

With the rise of the multimedia PC, and the increasing availability of video editing tools (including bakes-ins like Windows Movie Maker and iMovie), more people than ever were creating independent video, but they faced two major problems:

1 – There was no good way to transfer, transmit, distribute, or broadcast them 2 – If they were working with digital video, the resulting files were too big to keep around considering the price of storage.

One notable exception to the otherwise somewhat dreary outlook for independent video production in the 90s was a tool called Macromedia Flash, which enabled the creation of simple animated videos in a way that could be streamed over the Internet, even at the speeds available to most people in the 90s. It didn't look good, but it did work!

Outside the US, Sony released a product in 2000 that was designed to enable the live production and distribution of television over ISDN ("Integrated Services Digital Network", a transitional internet technology that provided faster internet than dial-up but which was replaced by DSL and cable before it had a chance to find a foothold) using a camcorder-laptop called the Vaio PCG-GT1. It appears to have worked, although it certainly didn't have much of an impact on the market. Technology was changing too quickly, the world was barely catching up. One video codec gave way to another and another, storage got cheaper, computers got faster, bandwidth increased. DVDs ate the world, HD became an option.

And then, YouTube ate the world.

3.3.1. Successes

While the era of the optical disc was not a good one for many kinds of independent video, it was a very good time for a new media product, one born solely of the internet age, and one from which we can learn a great deal: The Podcast.

The premise is simple: it's a radio show!

Well no, it's a little more complicated: It's a radio show on the internet.

Well, no, it's not just a radio show on the internet. It's a radio show on the internet that you can download.

... It's a radio show, on the internet, that you can subscribe to and have downloaded automatically, and sync automatically to your music player, so you can listen to it in your car.

Podcasts were a way for anyone to publish audio, and distribute it directly to their listeners. It was cheap to get started, easy to do, easy to learn, and while it had a lot in common with Radio, it was also entirely a New Media phenomenon.

The important parts about podcasts were:

1 – Podcasts used an open standard for subscriptions and distribution 2 – There was no central authority or gatekeeper. Anyone with an internet connection could start a podcast, and anyone with an internet connection could listen to that podcast. 3 – The primary method of interacting with a podcast was to Subscribe, which meant that the hard work of acquiring a new listener paid dividends. If you wanted to listen to a podcast you probably didn't just download the latest episode, you added it to your podcatcher. If you hated it, you might unsubscribe quickly, but the built in Subscription by Default mechanism made podcasts sticky in a way that other forms of new media, especially in the early days of the internet could not be. 4 – There was no gatekeeper. This was also point 2, but it's big enough to repeat. Traditional podcasting, outside of the walled gardens of Spotify and Google Podcasts, is the closest we've ever had to truly democratic media distribution.

3.3.2. Failures

Sure, some folks were making animations, and other folks were still making VHS tapes, or shooting on video for DVD distribution, or shooting on DV for VHS distribution, or whatever, and that's great. But public access basically fell apart, the world moved away from a read/write medium towards a read-only medium, and everyone sat in a holding pattern for a few years, able to see that a major technological breakthrough was at hand, but underestimating how much work it would take to reach.

The lesson to learn here is to make use of the tools that exist, not the ones that might exist in the near future.

3.4. Like and Subscribe (The false promise of youtube)

I won't recount the history of the rise of youtube. It was, at the time of writing, less than 20 years ago and it has been documented to death elsewhere. The creation of youtube was inevitable. Google's ownership of youtube was inevitable. This is the world we live in.

The internet got fast enough to support video distribution. Computers got fast enough to produce and consume compressed video. Compression got better. It was inevitable that, at the nexus of these things, would be a radical transformation in the way video was created and consumed, and there was.

I do not want to sell youtube short it is, and it was even more so in its early days, a truly remarkable platform. Even as early as 2010, 35 hours of video were uploaded, on average, every minute and more than 2 billion videos were viewed per day. That scale is absolutely, mind-bogglingly massive. It is basically impossible to reason around numbers that large, so I won't try. Youtube received an unfathomable amount of content every day, and it was watched by an even more unfathomable number of people.

If youtube had been a neutral, benign force, it would be easy to call youtube the culmination of the calls for diversity in the ecology of the videosphere. Here is a platform to which anyone can upload a video, through which nearly any kind of content can be distributed, and upon the back of which many people could make a living (if not a fortune.)

In a 2009 interview, Michael Shamberger expressed exactly that sentiment, saying "[Modern Social Media] is exactly what I was talking about in making media two way and empowering people . . . only better." It is easy to see why he carried that optimism about social media, and about youtube specifically, but his own text *Guerrilla Television* provides a framework from which we can critique this view.

Youtube is, after all, a subsidiary of one of the largest corporations to have ever existed, and it exists for the dual purposes of extracting profit and controlling the flow of information. Youtube takes all the trapping of democratized media and buries them under invasive spying, advertising, and an algorithm designed to Increase Engagement at the expense of anything and everything else, which inevitably makes youtube a distribution network for increasingly extreme content in the name of increased engagement.

3.4.1. Case Study: The Chris Gethard Show

Chris Gethard is a comedian and a writer. In 2011, he started a television show on the Manhattan Neighborhood Network. He released episodes of this show as a podcast, and eventually he also live streamed the show through his own website. It was absolutely chaotic, unlike anything that would have ever been allowed on mainstream television, and it was beautiful.

Gethard ran the show weekly for several years and built up a huge, dedicated fan base. Eventually, the show was picked up for production by actual cable networks, and it bounced around from network to network and then it died. Gethard continued to produce independent media. His podcast "Beautiful Anonymous" was recently selected for inclusion in the collection of the Library of Congress.

During the 2020 pandemic lockdown, Gethard launched Planet Scum TV. Planet Scum was a live streaming and VOD television network that leveraged major online services like twitch to enable people to make and distribute television programs from their own homes at a time when the production and distribution of traditional television was all but impossible. Gethard's work directly inspired what I am doing today. He proved that it was possible for truly independent media to make the jump to traditional broadcasting, and he demonstrated that community based independent media is the best potential future of broadcasting.

Gethard, I suspect, would agree with many of the ideas outlined in this book. Through his work, he has consistently chosen to embrace many of the core principles of Community Media production, and he has managed to do that while also existing within the structure of traditional media.

Many of the solutions and ideas we will explore later in this text are derived directly from the techniques Gethard explored, but have been adapted to center truly independent distribution as not only the goal but also the only ethical and sustainable path forward.

3.4.2. Successes

Modern technology has enabled the creation of video at an unprecedented scale. Nearly everyone has, in their pocket at all times, a camera capable of producing video at a quality that was unimaginable in 1995, that can edit video, add titles, upload it to a video sharing service, or even "live-stream" that video, broadcasting it in real time into the homes of anyone who cares to watch.

This has the potential to be revolutionary. It has been used in ways that are revolutionary. Over the last decade, we've seen countless examples of police brutality caught on video, holding these state actors accountable for the first time. We've seen citizen journalism at a scale that would have been unimaginable in 2000.

Youtube and other commercial, for profit, video sharing services have enabled the distribution of video on an unprecedented scale. Billions of hours viewed every day. We've seen sitcoms, fan-made continuations of major television and film series like Star Trek and Star Wars, fully independent film and television at every level of quality, all created by People and distributed through youtube and other commercial platforms to Other People.

This is all very good, and almost wonderful. But youtube is, after all, the subsidiary of one of the largest, and most pervasive corporations on the planet. We cannot depend on google.

3.4.3. Failures

Youtube's economic model demanded that it become a tool of radicalization, and so it has.

This era of online video is plagued with stories of people who do things like shoot their friends or crash an airplane in the name of views. When they inevitably get caught, they feign contrition and face minimal consequences.

Meanwhile, traditional television has also seen falling profits as more people move to youtube (or, in this modern era, to other streaming services), and traditional television has, as well, moved towards increasingly extremist content in order to drive engagement and therefore revenue.

Cory Doctorow refers to this as the enshitification cycle. In order for us to have a media landscape that is truly democratized and participatory in a way that can be genuinely revolutionary, our distribution channels must be immune to enshitification.

As Shamborg said of broadcast media in Guerrilla Television, so to is modern digital video distribution "overly-competitive" and "over-centralized", but worse than that, it's also opaque. Youtube has shifted the burden and risks of running a media corporation on to individuals and teams too small to effectively respond to change, and then thrown them in to a landscape where the ground can shift underneath their feet. Their accounts can be terminated for no reason, their videos can be de-monetized or just de-emphasized, and even the "subscription" mechanism built in to youtube is no guarantee that your subscribers will actually know that you've published a new video, much less watch it ("Be sure to click the little bell, so you know when we etc. etc. etc.") Simply put, youtube is an unaccountable, unknowable beast standing between viewers and producers and extracting a high cost from each one in exchange for a service that is far less valuable today than it might appear at first glance.

Every person who distributes their video through youtube serves to enrich a company that is actively harmful to the media landscape, and likely to the world as a whole. Every person who watches videos on youtube does the same. But everyone does it because, at least until very recently, there was no viable alternative.

Read on to the Manual section for some viable alternatives.

3.4.4. Further Reading

- [STILL FIGHTING "the BEAST": GUERRILLA TELEVISION and the LIMITS of YOUTUBE by WILLIAM MERRIN originally published in CULTURAL POLITICS Volume 8, Issue 1 by Duke University Press](#)
- [Chokepoint Capitalism How Big Tech and Big Content Captured Creative Labor Markets and How We'll Win Them Back By Rebecca Giblin and Cory Doctorow](#)

Chapter 4. Meta Manual

Up to this point, we've explored the ways various independent video movements succeeded and failed from the dawn of home video to the modern day. These people were individualists working towards a vision of DIY media, and I have alluded to the idea that a better world is possible. I am calling that better world "Community Media."

Community Media isn't New, but it is changing. The means of producing media are more accessible than they've ever been, and communities are embracing that with gusto. We're seeing a revival in the production and distribution of zines – Hand bound, cheaply made magazines, often made with photocopiers or laser printers –, alt-comix (independent comic books produced using the same techniques used in zine making), hand made websites, and even independent video games, and we are seeing these things treated with the same respect that is often reserved for larger productions.

Increasingly, people who consume media want the people who make the media they consume to be to be real people and not faceless corporations. This can be seen through the proliferation of crowd funding sites, and through online marketplaces like etsy and gumroad. More than that, however, there seems to be a trend towards ensuring that these real people are fairly compensated, and treated well. This trend can be seen in 2020's Shorter Games With Worse Graphics bundle, distributed through itch.io, which was inspired by the viral tweet, copied and pasted by dozens of accounts "I want shorter games with worse graphics made by people who are paid more to work less and I'm not kidding", in response to dozens of stories of the horrible working conditions in game studios across the country.

This movement is growing organically. It is in the air. People are dissatisfied with the current state of major media productions, and they are looking for a new way forward. It is up to us, as media creators and producers, to shape what that new way forward might be. We have to choose between embracing the libertarian silos of the capitalist zero sum game that brought down so many of the DIY media movements that predate us, or embracing a communal approach that enables our movement to control large parts of both the production and distribution of our media.

If we can effectively seize the means of the production and distribution of media, we can build an independent media movement- a community media movement- that can sustain and outlive the cannibalistic tendencies that are currently devouring modern major media institutions. We will not be overnight sensations, no one will get rich, and that's the point. We must strive to build a media environment that can sustain.

4.1. What is Community Media?

Community Media is independent media made and distributed by a community for a community. Sometimes these are the same community, sometimes they different communities. The important thing is that it's groups of people coming together to tell stories for one another. Community Media can take lots of forms: Music, education, entertainment, games, books, magazines, etc. It can be serious or silly, or both or neither.

At its best, it is licensed in such a way as to allow reuse and redistribution, and to require derivative works to follow the same terms. Whether or not it is open licensed, it exists in a way that does not directly enrich any multi-billion dollar corporation.

Community Media doesn't mean a specific style of production, or a specific kind of content, or a particular subject matter. When I say Community Media, though, I am referring to videos produced under a certain set of values. Specifically, Community Media stands for treating the people who make media fairly, compensating them when possible, treating people with compassion and dignity. Community Media stands in opposition to the astroturfed, vitriolic, hate filled rhetoric of right wing fascist propagandists masquerading as grass roots alternative media. There is no room for Joe Rogan, Charlie Kirk, or Tucker Carlson in this movement.

4.2. What is Community Television?

Community Television is TV made by people, distributed through channels and networks made by and controlled by people.

Community TV doesn't have to look like traditional TV, it does not have to be watched on a television. It can, however, look like traditional TV and it often is watched on a television. This is fine and good. Sitcoms? Sketch comedy? Interviews? Documentaries about the horrible treatment of Native Americans in your community by your grandparents generation? All of these things and more can be community TV if they are produced and distributed by members of a community to members of a community. Community TV might be news, educational content, talk shows, live music, entertainment, sitcoms, horror, science fiction, or anything else. It is video made by people who wanted to make video to be shared with people who want to see it without giving money to any billionaires in the process.

Importantly, Community TV must be distributed. It's not TV until someone else can view it far away from where it was created. Until then, it's just sparkling video with intent.

4.3. Why do we need Community Television?

The battle for the future of this country is happening at school board meetings, in city council rooms, and in courthouses across the country, every day, and yet most cities no longer have a local newspaper- or, if they do, it's owned by a faceless conglomerate that produces articles from four states away and doesn't even send a reporter to cover local events- much less a local television station. Most local news organizations, regardless of what major network they are affiliated with, are owned by a single vitriolic and nationalistic organization. This organization has a tendency to file lawsuits in the face of truthful statements, and the state in which I live does not have a strong anti-SLAPP statute, so I will not call them out by name. Search: Local News and "This is very dangerous to our democracy" for an example of the kind of control they exert. This organization editorializes and controls the content that is broadcast on these networks. They fearmonger, they serve as a corporate mouthpiece, and they spread hate.

Our media infrastructure is concentrated in the hands of an ever shrinking number of players, all of whom have a vested interest in maintaining the status quo and telling stories that promote their

ideology, and in making as much money as possible, as quickly as possible, no matter the consequences. It has been this way, essentially, for as long as it has existed.

Today, for the first time in the history of industrial society, we have the tools, technology, and distribution channels to actually do something about it. The vision of Guerrilla Television, that video would bring about some significant cybernetic shift? We have the opportunity to bring it to life.

Right now, if someone makes a video, they're almost certainly going to put it on youtube (or tiktok, or instagram, and the point is valid no matter which multi-billion dollar tech empire you slot in to the madlib). Youtube is going to make money on it (the creator might too, but less than youtube does, and youtube can decide not to pay the creator for a huge number of almost entirely arbitrary and opaque reasons), and youtube is going to use that video as a gateway to indoctrination. It algorithmically suggests followup videos "based on your views" which serve as a feedback loop, constantly directing you towards more and more extreme content.

Youtube (like most other tech companies) makes it's money by maximizing engagement, and it maximizes engagement by producing outrage. Outrage drives eyeballs, so facebook and youtube and most other content platforms will consistently recommend to you things that people who watch the things you watch will find distasteful. The American right has learned to weaponize that feedback loop, using the stream of ever more extreme content to take people from seemingly beginning starting positions such as "that one Star Wars movie was kind of bad" to "Wow, I really hate All Women and people of color." The fact that they can make money on the graft is a bonus, but the real victory is the mindshare.

Youtube is an indoctrination machine that also enriches a small group of far away millionaires and billionaires. Put simply, youtube is a tool of oppression.

If I want to watch video and I've decided that I won't give my attention to youtube, I can turn to traditional media, right? Disney, WB/Discovery, and a small handful of other companies control 90% of American media production. These corporations produce the vast majority of the rest of the media that it is possible to consume in this country. They collectively control so much of our political and economic landscape that it's difficult to effectively understand, or begin to trace, the breadth of their influence.

4.4. Values

We are constantly bombarded with entertainment and news media from these few companies, to the point that it is nigh inescapable. Even if the companies that feed us our news and entertainment were benign, it would be nearly impossible to keep their biases out of our media. Simply put, we cannot afford to have such a vital part of our society controlled by so few.

But these companies aren't benign, and their biases are explicitly overlaid on the works that they produce. There's a reason so many American movies paint the American military in a positive light, for example, and that reason is that the US Government pays them to do it!

Every second I spend watching a Disney or a WB owned property through legal means I directly enrich the people who stoked the outrage machine that led to, among other things, the election of Donald Trump. The economic story is dire, but it's about more than economics.

Our media shapes our perception of reality. Studies have shown time and again that when people experience fiction about people, they identify and empathize with those people. We experience the world through our media. We use it to contextualize and understand our environment. When the most popular TV shows and Movies are about renegade cops and violent vigilantes that take the law in to their own hands, we internalize and normalize that. This is deadly, as was unfortunately demonstrated by Gregory McMichael, among others.

Every second I spend watching a Disney or WB owned property through illegal means increases my investment in the stories that they are telling, and my acceptance of the way that they tell those stories. CSI and Law and Order and Brooklyn 99 increase people's trust and goodwill in police, regardless of their lack of basis in reality.

4.5. Copyright

Beyond the simple indoctrination through media that these companies practice, Disney, WB, and their ilk also exert almost complete control over modern American folklore. Copyright law means that they get to decide not only which stories featuring figures from modern folklore are the Canon, but also which ones are allowed to be told at all. Modern copyright lasts for the life of the author plus 70 years. The only people that a 70 year posthumous copyright protects are these megacorporation publishing conglomerates and their executives.

Want to use a Starfleet story to explore the concept of commerce in a post scarcity society? Too bad! CBS/Paramount can sue you out of existence, and bury your story forever!

A healthy DIY TV movement must concern itself with rebuilding modern folklore, creating a new canon of stories and characters divorced from this oppressive copyright system that was designed to specifically enrich and empower the already rich and powerful.

fig 2

Guerrilla Television suggested this symbol meaning Do Copy, which was cute and clever.

Today, we have a slightly more powerful legal tool in the Creative-Commons-Attribution-Share-Alike license. This legal tool can be applied by an author to new creative works, making it legal for other people to redistribute and share them (a core principle of DIY TV) and to incorporate them in to new works (a core facet of folklore), but it carries the requirements that 1) the original author must always be credited, 2) any new works that incorporate bits of this original work must be distributed under the same terms.

CC-BY-SA means that Anyone can remix or re-write a work, including people that we'd rather did not.

That hasn't been much of a problem so far because anyone who produces a derivative work must also release that derivative work under the same terms. Disney probably won't sign up for that, and if they do it means that we get to liberate something they produced for the commons.

CC-BY-SA does allow for redistribution. This scares some people off. I like to share this quote from Cory Doctorow, specifically from the introduction to the eBook edition of his novel Little Brother:

Giving away ebooks gives me artistic, moral and commercial satisfaction. The commercial question is the one that comes up most often: how can you give away free ebooks and still make money?

— Cory Doctorow

For me – for pretty much every writer – the big problem isn't piracy, it's obscurity (thanks to Tim O'Reilly for this great aphorism). Of all the people who failed to buy this book today, the majority did so because they never heard of it, not because someone gave them a free copy. [...] I'm more interested in getting more of that wider audience into the tent than making sure that everyone who's in the tent bought a ticket to be there.

— Cory Doctorow

Giving away DIY TV, making it explicit that we are giving away DIY TV, gives us the best shot of being seen by the most people. Being seen by the most people gives us the best shot of eventually becoming sustainable, or perhaps even profitable.

CC-BY-SA does not prohibit charging for re-distribution. I think this is an acceptable trade-off. Anyone who is charging to redistribute a CC-BY-SA work has to have that work clearly labeled as CC-BY-SA with credit to the original creator, presumably the work would be freely available from that creator (or elsewhere on the internet, able to be searched through the name of the work and the name of the creator.) If someone is willing to pay for it anyway, it's likely as the result of some manner of transformation (did you make a physical copy? Great! You should be paid for that. Did the original disappear, and now your archival copy is the only one that's left? Thank you for your service, I'm glad to help cover your bandwidth costs.) If it's not the result of some transformation, and someone is still willing to pay for something they could get for free elsewhere, at least they will still get the work and a link back to the original source.

We revisit copyright in the Small Things section below.

4.6. So, really, Why Community TV?

If we're ever going to actually affect social change, we're going to need to provide home grown,

community alternatives to the media produced by the entrenched power structures represented by these mega-corporations. We need to hit them at their bottom line, we need to reduce the mindshare that they have, and we need to tell our own stories, which means creating (and consuming) compelling community made television.

Independent media production and distribution is among the most significant and necessary acts of protest available to most people today. The simple act of creating and distributing any media outside of the control of a multi-million dollar corporation is a radical act.

We can and must liberate the media.

Chapter 5. Manual

5.1. How to create Community TV

Making television can be very easy, depending on your definition of television. I will briefly touch on production techniques later in this text, but I will be discussing these things in big abstract terms. I'm not teaching film school here (and you don't need film school to make TV.)

In the most basic terms, you make DIY TV by pointing a camera at something worth recording, and pressing record. Probably, you'll want something a little more polished than that, but simply Pressing Record was the key to the video verite style of TTV, Lanesville TV, Metropolis, and many of the other early DIY TV pioneers.

Don't overthink it, start small, stop when it's good enough to stop.

5.2. The Smallest DIY Media Toolkit

If you want to start making Community TV today, you probably already have the tools you need. Nearly any smartphone produces significantly better video than the best video cameras that existed in 1999, and there is software for video editing available for free on both Android and iOS. I will not recommend any specific Android or iOS video editors, because this landscape changes quickly and tools that I have recommended in the past have been rendered basically unusable by the proliferation of advertisements attempting to make them profitable.

Instead, I recommend this:

- The phone you have, or the camera you have, whatever it is
- If you don't have a phone or camera, but you do have access to the internet and a mailing address, shoot an email to video@newellijay.tv with the subject line "Community TV Camera" as we'll work with you to get you access to a camera. It won't be good, but will get the job done.
- Any computer made since 2010.
- Ditto the above, with the emphasis on it won't be good. We work with an electronics recycler to keep computers out of landfills. It will work! It will function as a computer and be able to edit videos, but it will not be fast.
- Kdenlive
- KDENlive is a piece of free and open source software that can be used to edit videos. It will run on basically any computer, and it is fairly easy to use.

When you finish a piece of Community Television, you'll need a way to distribute it. Later in this document, I discuss complicated ways to distribute things on the internet, but the simplest way to do it is probably to leverage The Internet Archive at [Archive.org](https://archive.org). They provide a huge amount of storage, and

will host your videos. They are a non-profit, they will not stick advertising on your videos, and they will likely continue to exist for a really long time.

You can share those videos on websites, social media, etc. If you license them under a creative commons license, other people can also help host and share them. You can use a service like Neocities to host a free website through which you can curate your videos, and provide a landing page with context to others.

This is, perhaps, not the best way to distribute Community Television, but it is the cheapest and fastest. Use what you have, leverage the resources of the existing community.

If you have more technical expertise, or members of your community who are more technical, you may want to explore installing and configuring a Peertube server as discussed below and covered in our supplement Community Hosting.

5.3. Tools (Hardware)

As you may have guessed, I'm not about to make grand edicts about what gear you should use. Instead, I'm going to tell you about the gear that I use. I will talk about a few cameras, a few microphones, and various other pieces of gear. I am not suggesting that you use any specific item on this list, I am trying to provide a framework from which to evaluate the gear you have available against the goals of your production.

5.4. Tripod

A bad tripod will get you a better shot than a good cameraman. If you're in a position where you can use a tripod, consider doing so.

We got all of our tripods from local thrift stores for just a few dollars each, and they are fine. Most big box retailers also sell very cheap tripods, and some even have cellphone stands that can be mounted to a tripod.

Eventually, you may find yourself looking for a better tripod, this is the first piece of kit that I really got frustrated with. I was lucky enough to find a better tripod at the thrift store, but I frequently see deals for used tripods on craigslist, ebay, etc. Don't overthink it.

5.5. Cameras

Arguably the most important tool needed to make DIY TV is a camera, but we live in a weird age where most of us are, at any given moment, carrying a single device that can be a camera, an editor, a transmitter, and more. Any advice about cameras must start from the very true statement that the best camera is the one you have with you.

If you don't have anything better, use your cell phone. Academy award winning director Steven

Soderbergh has used iPhones to shoot multiple motion pictures over the last 10 years. I'm no fan of Apple (but I'm no less of a fan of Apple than of any other major corporation) and this is not an endorsement of any particular phone. Use what you have.

The most important parts about your camera are:

1. you have it with you
2. you know how to use it
3. you can keep it powered
4. it has enough storage for your shoot

Beyond that general statement, here are some of the cameras that I use.

5.6. An old cell phone + a cell phone mount + a tripod

This makes a great livestreaming rig, backup camera, or primary camera on a shoot.

5.6.1. Sony Portapak

I have five or six EIAJ-1 sony PortaPaks (and dozens of other EIAJ compatible cameras and equipment) from circa 1970 to sometime in the mid 80s. These cameras produce a very particular look of video, and it's not a good one. I capture the output of these cameras directly in to a small cheap recording monitor (see "other stuff" below) or live stream from them in to a knockoff easycap.

Some of these cameras were broadcast cameras when they were new. Some were home video cameras. Regardless, the footage that results looks like it was shot on a camera from the 1970s or early 1980s. Sometimes that's what you want! Sometimes, it's all you can get. In either case, it's fine. Use what you have.

5.6.2. Cannon XA 10 and family.

I have a Cannon XA10 that I acquired second hand at a yard sale. The footage it produces is fine. It's "HD" and has good color out of the box. I like the XA10 because it has XLR jacks, so I can use real mics with it. I have access to real mics, so this is helpful. There are other ways to use real mics with a camera beyond integrated XLR jacks (see Other below), but it was cheap and available and I bought it.

5.6.3. Kodak zx1

The Kodak zx1 was released in 2009 to compete with the Flip video camera. Unlike the Flip with its fragile integrated USB port, the zx1 shoots to a standard SDXC card, and will happily shoot dozens of hours of mediocre 720p footage on to a 32GB microSD with the appropriate adapter.

The footage does not look great, but it's fine. There's nothing specifically wrong with it. The integrated mic also sounds fine, most of the time. The cameras used to be waterproof, but I don't know that I would

trust that today. They run on rechargeable AA batteries for hours at a stretch, and you can swap in alkaline or lithium AAs in a pinch.

I like gear that uses commonly available open standard parts like SD cards and AA batteries. I also like gear that's cheap. I have at least half a dozen of these zx1 cameras, and I didn't spend more than \$20 on any of them (some of them were free!)

Using old digital cameras can be a really cheap way to get access to a second or third camera, or to have a camera that you feel comfortable using in situations where you wouldn't want to risk a cell phone or a nicer camera.

If you're going to pick up an old camera, make sure it at least supports SDXC and that it uses a common battery. There are a lot of otherwise great cameras that only use batteries that are no longer made, or only shoot to memory stick duo or top out at 4GB SD cards. The 00s and early 10s were a weird boundary time in technology, full of a lot of promising products saddled with unforgivable fatal flaws. Often those flaws have grown even more fatal with the passage of time.

My point is not that you need a zx1 (although, hey, maybe you do?) but that you should use what's available.

5.6.4. Sony FS-700R

This is an expensive cinema camera that I have access to through the Ellijay Makerspace. I have used it two or three times, and the footage it produces is beautiful.

But it is heavy, cumbersome, and confusing, and I don't like using it.

Use what you have.

5.6.5. DJI pocket

I got the DJI pocket as a gift. It's an action camera with an integrated gimbal made by a manufacturer of quadcopters. It's fairly expensive, but it does take some great looking footage, and it includes a wonderful wireless mic. I use it all the time.

It is designed to be used with a cellphone app. This is a real pain in the ass, and I carry a separate cellphone or tablet that is not connected to cellular networks specifically for use with this device on those shoots that I expect I will need it. I do not trust the application to be installed on my primary cellphone. So it goes.

Being able to remotely control the camera from a phone, and to use the phone as a remote monitor is a neat trick. If there was a way to do it safely I would recommend this camera more explicitly. As is, I use it because I have it, and I use it in situations where I can't use something bigger, where the integrated gimbal is helpful, or when I need to be able to shoot on my own, and it's helpful to be able to adjust framing and zoom from a dedicated device.

5.6.6. DJI Mini

Do you need a quadcopter with a camera on it? Probably not. But there are times when the DJI mini was the only way I could get the shot I wanted. It produces beautiful footage, it's fairly easy to fly, and doesn't require any special clearance from the FAA.

It also requires a special app (and a different one from the DJI pocket.) It's also too expensive.

There are lots of other drone style cameras, and some of them are much cheaper. If you find yourself in need of something like this, ask around. Chances are good that someone in your community has one they rarely use.

Please keep in mind that regulations around when and where you can fly a drone style camera are strict and changing all the time. There are lots of areas (national parks, for example) where you can't fly, and with larger model drones you will need a license and to clear your flight plan with the FAA. This is less cumbersome than it sounds, and almost no shot is worth going to jail.

5.6.7. Various Mini DV and HDV cameras

Consumer video cameras reached something approaching professional quality video well before consumer storage technologies caught up to them. I have dozens of MiniDV and HDV cameras that all produce really great looking HD or SD footage.

I use the ones that have clean HDMI or RCA out to livestream, or to record to a dedicated external recorder. The ones that don't have a clean HDMI or RCA output do not get used, because I will not trust any tape mechanism.

5.6.8. Sony point and shoot

When I personally got serious about shooting DIY TV, I bought myself a Sony ZV-1. It was expensive. It's the only camera on this list that I purchased intentionally, for myself, to use for TV production. It is a compact point and shoot camera that shoots good looking video to SD cards, that lasts for a while on a charge, that charges over a standard port, and that uses a somewhat common battery.

It also came with a good shotgun mic and, even though it's legally a still-camera and not a video-camera, it does not have the 10 – 15 minute recording limitation that plagues many point and shoot cameras (it's a tax thing, and it's annoying.)

Basically, it's a simple, reliable, good looking camera that I can use when I want to make things that look good. I didn't need something this nice for what I'm doing, but I could, so I did.

Use what you have.

5.6.9. Other Cameras

I've heard good things about the blackmagic pocket line if you want to get really fancy. I don't, so I haven't.

5.6.10. Mics

What good is a picture without sound? (Not very much!)

Getting good sound is hard in a documentary setting, and it's hard in a studio setting, and it's hard outdoors and it's hard indoors and it never really gets easier! It's also, arguably, even more important than getting good video. Viewers will forgive a multitude of sins if your audio is good.

So, quick tips:

- use a wind sock if you're outside
- use a lav mic, even just a 3.5mm one, if you can
- check your sound, don't just live monitor but actually check playback before you shoot too much
- Shotgun mics are good
- The shure sm57/sm58 is fine for most tasks, durable and cheap.
- Never depend on a single mic, have other options for safety

5.6.11. Lav Mic

A lav mic, or lavalier microphone, is a small microphone that clips to the subjects clothing. They are frequently used in television productions.

I bought a kit of 3.5mm and 2.5mm wired lav mics, and I use them all the time. No one cares if it's visible in the shot. It is the best option in a lot of cases. Any brand will do.

5.6.12. Wireless?

I don't like wireless mics, because batteries die, and you won't notice that you're suddenly not getting sound. There are times to use them. I use the one that came with the dji pocket, for example, but I always keep a backup.

5.6.13. Sure SM57/SM58

These have XLR output and need a mic pre-amp, but they're sturdy and they sound okay, and they look the part. I use them with the cameras that have XLR inputs when we're doing things where it makes sense to have a person holding a mic.

5.6.14. Some kind of shotgun mic

Shotgun mics are for pointing at far away sounds. They pick up a cone of sound directly in front of them, and reject off axis sound pretty strongly. This makes them great for field recordings or for use as boom mics.

Ours needs phantom power, that's a pain in the ass. It'll run on battery power (which is great until the battery dies silently.)

My little Sony point and shoot came with a shotgun mic, and it's great. I use it as our safety mic at a lot of shoots, and it has saved my ass on several occasions.

5.7. Other stuff

5.7.1. Computers

I worked with an electronics recycler to get a handful of older thinkpad laptops. I installed Ubuntu Studio on them, and they power my live stream and editing workflows. I spent less than \$200 on each of them. Any computer is fast enough for this work these days, and many cellphones are too. See software bellow, and don't think about it too hard.

5.7.2. Zoom 4 Track

I have a Zoom PodTrak P4. It has 4 XLR inputs. I use it for doing live sound for a variety of situations. It makes a great external audio capture device, and I will frequently use it as our primary audio capture, using the on camera audio for sync and safety.

This device was specifically designed for doing podcast recordings and panel interviews. If you're in a situation where a group of people will be sitting around and talking about something, this is a great way to make sure that everyone can be heard, and you can cut out any background noise without losing any speech.

It's not a Need for a production, but they're not super expensive and they're handy.

5.7.3. Video capture

To get video from a camera in to a computer in real time, you need some method of video capture. This enables you to pull the live feed off of your camera and in to a computer program like OBS.

For standard definition video capture- Video sent out using RCA/Composite cables- I use a knockoff Easycap that I got on Amazon for \$10. It usually works. When it doesn't, I use a different one.

For HD video capture I use a product labeled "USB 3.0 HDMI Video Capture Device". It doesn't have a brand name. It has a USB port and a USB-3 port. It does the thing, I don't question it.

5.7.4. Hardware Video Mixer

If you're going to live stream with more than one camera, you might need a video mixer.

I have a couple of incredibly cheap Vestax hardware video mixers that barely function, and I use them for our live stream when I have more than one camera input. Prior to that, I used a physical A/V switch with physical buttons switch between Composite Video, which worked just as well. These are all Standard Definition mixers. HD mixers exist, but they are beyond the price I've been willing to pay so far, and SD video is good enough for most live broadcasts.

5.7.5. Tools (Software)

I will advocate for free tools (little f) because they are accessible. When possible, I will also advocate for Free tools (capital F) because they tend to share values with the DIY TV movement, they are shared freely, they are made by real people to solve real problems.

5.7.6. Operating System

The operating system is the software that enables your computer to function. You probably use Windows or MacOS. That's fine!

I run Ubuntu Studio on my studio computers because it's free and it comes with all the tools I need to produce, edit, and distribute media. Most of the tools I use are cross platform, and will also run on Windows or MacOS. The software packages that I am recommending are not the only options to perform these tasks, they are just the options I am familiar with. You should use what you are comfortable with.

5.7.7. Video Editor

I use Kdenlive as my primary video editor. It's a standard NLE (non-linear editor) and it can do basic special effects, transitions, etc. The interface is pretty straightforward and easy to use, it's pretty stable. It's Free, and free. I like it because it treats me with respect, and it does what I need it to do.

Other Free video editors include Openshot and Shotcut.

I know some people really love Da Vinci Resolve, which is a proprietary, closed source application that is distributed for free. Resolve feels half finished and antagonistic compared to Kdenlive. It can do a lot more than Kdenlive does, it is a much more powerful program, but I do not enjoy using it.

And, if you're in a pinch, both iMovie and Windows Movie Maker are much better than they used to be.

I won't use Adobe's products if I can avoid them, because Adobe has a stranglehold on the video production world in a way that gives them too much power, and I will not add to that. If you have access to Adobe products, and know how to use them, that's great! Making DIY TV is more important to me than what tools you use to do it. Use what you're comfortable with.

I am most comfortable with an editor that I can own, rather than renting, that doesn't spy on me, and that doesn't crash all the time.

5.7.8. Broadcast software

When you are live streaming video over a service like twitch or peertube, you'll need a piece of software to capture that video and broadcast it over the internet.

I use Open Broadcasters Studio (OBS) to live stream and perform live video switching.

Alternately, if you're looking to play back a 24/7 stream of videos, like a more traditional television station, you'll want a piece of playout software. I use FFPlayout as playout software for broadcasting pre-recorded video to a live stream.

We use Peertube as our Video on Demand and Livestreaming server, and a fork of the PeerVue roku channel to make our peertube stream available to roku users. We go in to more detail about how and why this works in the How To Distribute DIY TV section later in this text.

5.7.9. Image Editor

I use an image editor called Glimpse. It's a fork of GNU's Image Manipulation Program (IMP), but it isn't being actively developed anymore. GNU's IMP is fine, too. I know some folks who really love Krita (which is also free, and runs basically anywhere.) I'll probably learn to use Krita in the near future. (but, basically, use what you know and have access to.)

5.7.10. Audio Editor

Audacity is fine for simple tasks. If you need something more involved take a look at [Ardour](#), it's a full DAW and is fairly full featured. There is a free version of [Ardour](#) and a paid version. Getting the free version running outside of a linux box is occasionally a frustrating experience, but there are plenty of tutorials to help. I have a license for the paid version, because I find the software to be worth paying for.

5.7.11. Other stuff

I use Droidcam OBS on my phone to live stream from my phone to OBS. This allows us to have multiple wireless cameras streaming back to a single source, which can be mixed without a hardware video mixer. It can produce really stellar results, but it is best suited to a fully live production (as the phone usually can't record and broadcast at the same time, and OBS can only record the mixed output, not the raw footage from each device.) There are ways to get around this broadcast only limitation, but they get complicated and fragile.

5.7.12. Techniques

This isn't film school, you don't need film school. At it's heart, the technique for making DIY TV is simple: Point the Camera at something worth seeing. Sticking a camera or a cellphone on a tripod and letting

events unfold around it is often the best way to capture what is happening.

The same holds true of fiction and life. If it's worth seeing, and you catch it on camera, the rest is just polish and bells and whistles. We can live without polish and bells and whistles, but sometimes they're nice.

Shoot and edit a lot of footage. Watch your footage. Don't worry about getting it Right, especially right out of the gate. The act of editing a lot of footage, and watching those edits, will teach you a lot about how to make TV. You will get better, give yourself permission to be bad.

5.7.13. Shooting Life

When shooting real life events such as concerts, protests, sports, etc. there are some things to consider which are unique from when you are shooting fiction. There are rarely do-overs in real life, so I tend to focus on Coverage (that is to say, getting as much footage as I can from as many angles as possible, and sorting out the mess when I'm done.) This takes longer in the editing room, but it means that I stand the best chance of capturing the bits that are worth seeing.

If I'm in a situation where I have a degree of control, such as shooting a concert or an event that I am hosting, I will set up 2 – 3 stationary cameras (usually our Canon XA10, or one of the Canon Vixia line) on tripods. One of these is a wide shot, our "safety" shot for when something significant happens that none of the other cameras catch. It's not a great angle, but it's a stable angle. The Canons specifically can run from mains power and use 2 128+GB SD cards, meaning we can shoot for more than twenty hours at a stretch. I turn them on and walk away. The goal with these cameras is to capture everything. They are cameras we can cut between, or cut to when there's nothing worth seeing on our handheld rigs.

I will then shoot from the floor, handheld. Often, I will do this with my little Sony point and shoot, one of the cheap Kodak flips, or my cellphone. If it's a big shoot, I might have another person also shooting handheld. The end result is a lot of footage, but it gives us a number of angles to cut between when we're editing.

I also, usually, will have at least one camera plugged in to a live stream. I capture the livestream separately, and may occasionally cut to it from the later edited video. The live stream is ephemeral, the later edited video is the definitive thing.

For events and situations with less control, there are three basic techniques:

1. Try and capture everything

One wide camera angle, shooting as much as possible for as long as possible.

This rarely works without the addition of a second camera in the fray

2. Personal view

This works well for protests and things of that nature. Run the camera from your POV for as long as you can manage, it sees what you see.

This is my preference, personally, as it comes with the least risk of Missing the Action (at least, until you run out of power or storage space.)

3. Stage some shots

This is the more filmic technique. Get a few clips here and there. Interview some people.

It works well, when it works. Staging interviews can be a great way to get context on whatever events are unfolding. You have to be lucky enough to capture the good stuff, and it's easy to miss something significant while you're waiting on your camera to start.

Of course, depending on the event you may still want to produce a live broadcast. We'll discuss techniques for that below.

5.7.14. Editing life

I do a large number of concert films. I try to pace a cut between cameras about once every forty to sixty seconds, and to introduce some small amount of motion when I can. I try to stick to events as they unfolded, and to remove only large periods of inactivity (for example, the intermission between a set.)

When I have interviews, voiceovers, or other content shot separately from the main action designed to provide additional context, I try to excerpt from it and juxtapose it along side the main action. Sometimes that means inserting them in places where we would otherwise have inactivity, sometimes that means cutting away from the main action to get to the additional footage. Which choice you make depends on what you're trying to accomplish. Try both, watch them, see how you feel.

Some kinds of footage sometimes demand a stronger editorial hand. Early video pioneers favored a collage technique, sharing clips in a stream-of-consciousness style, letting their content provide context and commentary on one another. You can see this style of TV making on display in a polished form in documentaries like *Lord of the Universe*. You can also see it on full display in a less polished form in things like *The Videofreex* coverage of Mayday 1971. Other kinds of footage might be best served by other techniques. Experiment, you'll probably find a technique worth using.

5.7.15. A note on live streaming real events

Sometimes the best way to cover a live event is to do it live! I have a hardware video mixer, and I will sometimes send out three or four cameras and just live mix them. This works really well if you can be certain that there's usually going to be something worth seeing happening in front of one of your cameras, and you can cut to (and interrupt) pre-recorded contextual stuff when it makes sense to do so.

This is much harder than editing *ex post facto*, and much much harder than just sticking a single camera up in a corner for live streaming, but it produces better results than a single camera and faster results than an *ex post facto* edit.

If you have a crew of four or five and a hardware video mixer, try it. It can work especially well for live concerts and sports events. Alternately, if you have a crew of four or five with cellphones, you can try the same thing with Droidcam OBS or a similar software, and mix everything in software. If you don't have a

crew of four or five, that's fine! You can do other things to make a live event work, or you can just do an ex post facto edit. (This will be a temporary problem, in my experience. People love the idea of making television and will want to join with you, give them a way to do so.)

5.7.16. Shooting Fiction

Perhaps "Fiction" is the wrong word to title this section. If you're shooting in a Studio, in a setting where you have a reasonable expectation that things can be repeated, it enables a different kind of production technique than a live event. Of course, you can just set up 6 or 7 angles, press record, and shoot a few takes, trusting that you will have the coverage you need from your 6 or 7 cameras (and, frankly, this is the approach I take more often than not) but shooting in a controlled setting enables you to work in a way that is slightly more intimate. You can get multiple takes! You can experiment with closeups and tracking shots and pretend you're in theater school.

This is all great! Have fun.

We use a lot of green screens, because we have the space to set them up, the lights to light them evenly enough that we can effectively key them out, and the software expertise to do the same. Shooting with green screens can be freeing, but it's also difficult and frustrating. It's much easier to shoot on a location, or on a real set, provided such a thing exists.

Sets don't have to be complicated. We built a spaceship cockpit out of cardboard and discarded video game controllers, and it looks pretty good on camera (especially in standard definition! Not everything has to be HD. Shooting in standard def hides a multitude of sins.)

5.7.17. Music

When you're shooting and editing fiction it can be helpful to have some music. If you're not fortunate enough to have a team of talented musicians working with you in the recording studio at your local maker space (look, we got incredibly lucky here in Ellijay, what can I say?) you'll almost certainly be looking for public domain and creative commons music to accompany your pieces. These days, finding CC music is harder than it used to be, but resources like archive.org and wikimedia commons still exist, and it's possible to search bandcamp for CC licensed music.

I strongly recommend building a library of CC-BY, CC-BY-SA, and PD licensed material, tagging it with metadata, and keeping track of the particulars of the license of each song. This is hard and will take time. I don't have a good recommendation on software to manage this at this time.

In the meantime, we're working on compiling a library of CC and PD music which can be used for other people's projects (among other things). See "LINKS" at the end of this text for details.

Keep in mind that it is vital that you follow the terms of the license that your music uses, and that likely means not only crediting the author but providing a full link to the original source. If you find a piece that is CC-BY-SA you will need to Share Alike and license your work under the same terms (we do that by default on our end, to encourage everyone to give back to the commons.) I would avoid any work with an

NC or an ND in the license.

The right piece of music can elevate a video far further than you might expect. Taking the time to get this right can be very valuable.

5.7.18. Small things

A while ago, I published a document I called the Small Things Manifesto. It was a small document, much smaller than this text, about creating things for the sake of creating them (and also about the idea that creating things for the sake of creating them is a radical act, for all the same reasons discussed above.) In that document I outlined the following Principles of Small Creation, most of which apply very well to DIY TV.

You can learn more about the Small Things Manifesto at ajroach42.com/the-small-things-manifesto/

5.7.19. Principles of small creation:

- Scale and complexity are traps;
- It doesn't have to be scalable to 10M concurrent users if it's only going to be used by 10 people.
- It's better to work okay every time than to work perfectly one time in ten
- There is freedom in a lack of professionalism, in doing things incorrectly, and in doing things poorly
- A lack of commercial prospects is not a reason to prevent yourself from Coding or Singing or Drawing or Writing for the joy of the doing.
- We build things for people
- Specific people, small numbers of people, knowable, manageable groups.
- Include people
- We strive for the things we make to be Understandable when they need to be understood; Usable (and useful), when they need to be used; Enjoyable, when they are meant to be enjoyed; Discoverable, so that they can be found.
- Level editors! User Generated Content! Customization! Permission to remix and reuse and cover and sample and to do all the things.
- Respect our audience (users, viewers, consumers, etc.) and our artists (coders, videographers, musicians, etc.)
- Credit your collaborators
- Protect the vulnerable in our communities.
- Compensate people as fairly as is possible.
- Don't track users or harvest data
- No "Proof of work", if you hear the word "blockchain", slap someone.
- Do offer options for customization when possible

- Try to build things that will last.
- Consider the impact on your community when you no longer exist to provide the thing. How will The Thing outlive you, if it can outlive you?
- Consider the impact of your work on your community, strive to do no harm.
- Share, and make sure everyone else does
- This means licensing clearly, and making attribution easy
- We use CC-BY-SA for media and (a)GPL for software.
- (More permissive licenses are fine, more restrictive licenses aren't.
- "CC-ND" or Creative Commons – No Derivatives, limits the ability for others to transform your work, perpetuating the worst parts of our current copyright system.
- "CC-NC" or Creative Commons – Non-Commercial, prohibits those who share your work from monetizing in any way. Including CC-NC content in a magazine or web page with advertisements is a license violation, this can quickly lead to unsustainable situations.
- The licensing thing scares a lot of people off. CC-BY-SA means Share it with other people, credit me for it, and if you decide to make any changes or incorporate this in to another work, release your stuff under the same terms.
- This lets us distribute Small Media through lots of disconnected networks, while making sure that anyone who wants to can find the creator (and pay them!), and ensuring that a company like Disney won't swoop in and profit off of our hard work.
- Know your neighbors
- Physical or digital, get to know your community. Makes it easier to look out for one another.
- We're all real people, after all.
- Make it quick, make it cheap, stop when you hit Good Enough
- No one is going to be upset that your low budget, anti-capitalist disaster movie doesn't have billion dollar special effects. Tell the story and move on.
- Quick doesn't mean "Go as Quickly as you can", it means "cut out any steps that won't help you finish the thing." Don't burn yourself out making a small thing! But also, don't spend so much time polishing the thing that you never finish it.
- Don't give power and money to those that seek to destroy you, when an alternative is available
- Disney, Comcast, Fox, Sony, Adobe, Microsoft, Twitter, Google, etc. etc. etc.
- Provide community based alternatives to the things that major corporations create
- We can make our own News, entertainment, social media, music, art, games, toys, clothes, and food at various capacities. Support one another
- If you can afford to pay a creator who made a thing you enjoy, do.
- If you enjoy a thing, tell someone about it.
- If someone needs help that you can provide, consider helping

- If you need help that someone else can provide, ask
- Forget the social norms that prevent you from asking for help, or that lead you to disparage those who do
- If you've got nice gear, consider sharing it
- We help us.
- Don't let Gear stop you
- Use what you have.
- Nearly any cell phone can produce Good Enough video. Steven Soderbergh shot *Unsane* and *High Flying Bird* on iphones.
- "All Hail West Texas" by The Mountain Goats was recorded on the integrated microphone on a cheap, barely functional boombox, and it sounds like it. It sounds bad! It's still a wonderful, award winning album.
- Dozens of award winning documentaries were shot on the first consumer video cameras. These cameras produced some of the worst video footage imaginable. It's fine, anyone who cares more about the Fidelity of your gear than about the quality of your work is missing the point.
- Most of our gear is second hand and a lot of it is 10+ years old. Keep it out of landfills.
- If you want to and can buy some gear, find something good enough, and stop thinking about it
- There's nothing wrong with using something nice, if you have it or have access to it, but Diminishing Returns are real.
- Every dollar spent on gear, is not spent on the people involved, the sets, the costumes, etc.
- It's better to have a finished thing that's lo-fi than an unfinished thing in perfect fidelity
- Not everything has to be a Small Thing, but the best big things start small.
- Sustain
- Don't burn yourself out
- Take care of yourself and, if you can, help your neighbors

5.7.20. How to Distribute DIY TV

Until you distribute it, it's not DIY TV, it's just some videos. It is the act of broadcasting (or [Narrowcasting](#), as the case may be) that transforms some random videos in to Television. This recontextualization of a video in to a broadcast transforms that video from something that simply exists into something that lives a life of its own. It takes something personal and transforms it in to something social.

As a small anecdote, we do a weekly news broadcast. It is hosted by my good friend and trusted associate Will Dover. Even just a few weeks into that news broadcast, Will is recognized and greeted around town as a result of his participation in that broadcast. He has become the face of local news!

This recontextualization can be difficult and scary, but it is part of the transformative power of Television to bring people together.

But Distribution is a complicated topic full of lots of potential expenses and pitfalls, and that's why most people turn to youtube. While I find youtube to be a large part of The Problem, I also understand that many people feel they do not have the technical expertise to use anything else, and youtube is where the audience is. I will not fault someone for using youtube, but I have some suggestions on how to use it (see POSSE) and some alternatives.

5.7.21. Yunohost

Hosting can be scary! But it doesn't have to be. We use a tool called [Yunohost](#) which makes installing and maintaining complex software packages simple. We use yunohost to install:

- [Peertube](#) – A federated Youtube alternative
- Nextcloud – file sharing and syncing (like dropbox)
- Hedgedoc – a collaborative text editor (like a simple Google Docs)
- [WordPress](#) – The engine that powers our website

Yunohost is very easy to install and manage most of the time. Sometimes it isn't, but the community forums usually prove to be pretty helpful in those situations.

Today, we spend approximately \$40/month to host the infrastructure that powers [New Ellijay Television](#), including our website, our [live stream](#), our [roku app](#), our document storage, our file sharing, storage for our VOD and all of the storage for our collaboration tools and backups.

5.7.22. Peertube

[Peertube](#) is a free, open source, federated youtube alternative. It provides a way for people to publish videos on the internet, both VOD and live stream. It works well, and does some tricks that mean that it will scale better than any previous self hosted video solution. I won't get in to the technical details here, go look them up for yourself if that's your bag.

We use peertube because it takes care of a lot of the things that make managing a video website hard. It still needs a lot of storage, and it still needs some technical expertise.

There are a few ways you could approach the problem of needing a lot of storage. We get around it by using a cheap cloud provider based out of Bulgaria called [AlphaVPS](#) which provides 4TB of storage for around 25 dollars a month. This isn't an endorsement, that's just who we're using at the moment. Alternately, you could use block storage from one of several cloud providers for a fairly reasonable price, or you could self host if you have a fast enough internet connection.

True selfhosting is beyond the scope of this text, but I'm sure I'll cover it in something else eventually.

Peertube provides a way to do both VOD and Live Streams, and makes it fairly easy to share your videos. It provides an RSS feed for each video channel that people can subscribe to like a podcast. It provides a plugin which makes it compatible with chromecast. It is under active development, and it's getting better

all the time.

5.7.23. Roku

Roku, for better or worse, is the defacto standard for accessing people's televisions today. Roku provides a set top box, or comes integrated in to people's TVs. They're not a great platform, and they collect a ton of telemetry about viewers, but they are very wide spread and in the spirit of being accessible, it makes sense to publish a roku channel.

We use a fork of peervue which can be found at newellijay.tv/code (eventually). That page should provide step by step instructions for configuring your own Roku channel and getting it submitted to the roku store. It's fairly straight-forward, but there are a few pitfalls to watch out for around "trickplay" thumbnails, and "deeplinks", both of which are will be covered in our guide.

Roku isn't the only set top box platform, but it is the most common and it was the easiest for us to support. Our implementation is imperfect, we don't have any developers working on it, just a couple of folks who really wanted to make it work. We'd appreciate your assistance on that front, if you're a developer who wants to improve the set top box landscape for DIY TV.

5.7.24. Live Stream and playout

Peertube has built in support for livestreams. If you only want to go live occasionally, you can do that from OBS (Open Broadcasters Studio). This combination works pretty well, and is incredibly simple to set up.

If, on the other hand, you want to step beyond VOD with the occasional live stream and move closer to traditional broadcast television, you're going to need something to manage your schedule and playout.

We use a piece of software called [FFPlayout](#). It is not currently packaged for yunohost, but instructions to install and configure it alongside yunohost are available at newellijay.tv/code (eventually)

FFPlayout works more or less exactly like a live stream from [OBS](#), but has a front end through which you can build a schedule. It's a functional solution, but it's not perfect, and we are looking to improve it, or to find an alternative. For now, though, it's the simplest way to achieve our goals.

5.7.25. POSSE

There's this concept in the world of independent web publishing called POSSE. POSSE is an abbreviation for Publish (on your) Own Site, Syndicate Elsewhere. It represents the practice of posting your content (in this case Videos) on your own site first, then publishing excerpts, copies, or links to third parties (like youtube, facebook, tiktok, instagram, etc.) with links back to your original post on your site, to bring viewers back to your site.

This can work, but we put a small spin on it. Every video we publish to, for example, youtube is an excerpt or a trailer that ends with a 15 second explanation of why that video is only an excerpt and

where the full video can be found. Something to the effect of: If you want to see the full version of this video you'll have to go to our website. We can't trust youtube to act in the best interest of video creators.

We use a similar technique to share written content to sites like facebook.

On the other hand, we also have a presence on Mastodon, a free and open source, self-hostable, federated social media network and we share full videos there. We feel comfortable doing that because Mastodon provides a platform for social media that we can wholly own and control in the same way that peertube provides a video distribution platform that is fully within our control.

5.7.26. The Internet Archive and Other Options

[The Internet Archive](#) offers digital storage for all kinds of media. They are a non-profit, and provide a video player and embed links. If you don't have another way to host videos, they're a great option. You can host videos on the internet archive, and embed them in to a static website hosted through a service like [neocities](#), effectively creating a free video distribution solution.

Video files are big, and storage and bandwidth are still somewhat expensive. The Internet Archive offers this hosting as a free service, and depends on donations to stay afloat.

If you don't want to depend on a third party, you can also distribute video via Torrents. This won't allow embedding a video stream on a website ([unless you get creative](#)) but torrents are a very resilient way to distribute media without depending on much existing infrastructure. This kind of peer-to-peer file sharing is perfectly legal, and a great way to distribute your own Community Media.

5.7.27. Sneakernet

Sometimes distributing Community Media via the internet is cumbersome or otherwise undesirable. In those cases, we can learn from the [VHS Days](#), and turn to the postal service or [Sneakernet](#). This is a perfectly valid distribution method, and has been [widely utilized](#). There are lots of ways to go about Flash Drive distribution, ranging from just dropping a bunch of files directly in to the root of a flash drive and plugging it in to the USB port of a TV or bluray player, to building a full website that runs locally on the flash drive, with several options in between.

When we're showing our programming in locations that do not have consistently available internet connections, a flash drive directly in to a television is often not only the simplest way to get these videos playing, but it's also usually significantly more reliable than our usual internet based distribution.

5.7.28. Index and document

Regardless of what path you take, it's important to index your work. Keep a list of what you've released, and link to the canonical versions of them, in a public and indexed place. Make it easy to find what you've released, make the terms under which you've released it very obvious, make it easy for people to support you.

This might mean a website! You can make a website with [github pages](#), or [neocities](#), or [wordpress.com](#) for free, you can self host a website, you can use a tilde server, or you can pay for hosting from one of dozens of hosting companies. You might make your website directly in HTML, or you might use a template, or a site builder. Any of these options are valid, and I'm not going to get in to how to build a website, or who to host your website with here.

We mostly use alphaVPS, because they're cheap. We mostly use yunohost to install wordpress, because I'm familiar with it. This is fine.

Alternately, maybe a website is overkill. Maybe you want a markdown file in a git repo, or a social media account that only posts video links, or an index on gopher, or a gemini capsule. That's fine! Sometimes using a nontraditional approach to indexing and sharing videos is exactly what you need. Other times, a more traditional approach is better. You do what feels right for your project.

5.7.29. How to Fund DIY TV

The hardest part of what we're trying to do is compensating people (ourselves included) fairly for the work we do as part of creating DIY Television. This is both a matter of being fair to the people we are working with and also building an environment for the creation and distribution of independent media which can sustain beyond the time donations of the people who start it.

Making at least some money is a practical necessity of our movement, because this movement has to sustain and succeed when the ones that came before it failed. Financing is what toppled or otherwise undid so many of the previous DIY TV movements.

So, be up front about it. Your network will have a website. Make it obvious on that website that you need money, what that money will go to, how much money you get to keep out of each of the various options you make available, etc. etc. etc. Have options for your viewers and for businesses in your community to pay you.

Accept cash and paypal. Consider setting up a patreon style subscription for behind the scenes access, etc, **but also just accept funding from people directly**. Sell merch, sell ads.

You're providing a service, and you should be paid for it. It's okay (important, even) to request compensation.

5.7.30. Advertising

We run advertisements. Our target is roughly 2 minutes of ads per half hour of video (although we frequently broadcast less.) We sell these advertisements to businesses and individuals in our community that we believe are values aligned with our goals. We are not a public access network, we do editorialize who we will allow to advertise with us.

Selling ads can be hard while you're building up your initial viewers, and bootstrapping can be complex. Our strategy to mitigate this bootstrapping problem has followed this basic outline:

- We approached 10 businesses in town and offered three months of advertising them for free in exchange for them running our live stream on one of their TVs (or for letting us install a TV to run the live stream.)
- We approached the local chamber of commerce to show our live stream in their lobby, produce original content for us, and to promote showing our stream and advertising on it to other local businesses in the community
- On the strength of those 10 installations in businesses around town, we began selling advertisements to other businesses (and, in each case, we made the same “3 months free” offer, because expanding our viewer base is as valuable as getting new revenue right now)

So far, this has worked very well! Our reception has been a little overwhelming, and people seem to be genuinely excited about the material that we’re making available.

5.7.31. Making Merch

Learn to screen print. It’s much easier than it seems at first glance (although prepping a screen for the first time can be frustrating. Once you get the hang of it, it’s easy to produce 100+ t-shirts or posters in a day.)

You don’t really need any special equipment to produce screen printed t-shirts, although a way to expose your screens to UV, and a way to heat set the ink from your shirts quickly are useful.

Make a shirt for every original show you produce, make “fan club” shirts for your actors or characters, make a shirt or two for your network. Make slogan shirts, etc. etc. etc. Produce them on demand in house if you can.

We also work with a local antique mall that allows hand made goods. We sell our posters, shirts, DVD samplers, etc. from a bookshelf at that antique mall. This might not work well in your community, but it has worked well in ours.

We make stickers. We started making them in house, printing from an inkjet printer on to vinyl sticker paper and trimming them by hand. That’s exhausting. Now we order rolls of 3x3 “labels” from Sticker Mule. We sell stickers, we give stickers away with other orders, we leave some for free in the businesses that run our stream. This has proven Incredibly effective at spreading the word.

We print a zine called TV Forecast. It’s about our TV shows, and our production techniques. Some of the sections of this book were adapted from (or have been adapted for) TV Forecast. We sell copies for \$2, and consign them through businesses throughout town.

5.7.32. Getting Viewers

What good is television that no one watches? We’re building a movement to transform communities through the power of participatory media and that means we need people watching television. There are two big components in finding new viewers: 1) They have to know you exist 2) They have to care.

Make propaganda: stickers, flyers, and posters. Put them up all over town. Talk to local businesses and try to set up your stream there. Run commercials for yourself on your platform.

Have a website. Publish regular blog posts and run a newsletter (we use tinyletter, but that is not an endorsement.) Send out an email blast once or twice a month about what you're doing, what you're airing, and why. Keep talking about Why (they have to care.)

Send press releases to your local paper (if you still have one) about what you're doing and why.

Wear shirts with the logo of your network. Carry business cards. Talk to people, hand them out.

In my experience, people absolutely LOVE the idea of DIY TV, and will be very interested in learning more, but you have to give them an action to take. Make it obvious when they engage with something you've created as to what their next steps can and should be. (Our flyers say things like Find us On Roku. Subscribe online. Make TV With US. Advertise With Us. etc. etc.)