

# Liquidsoap in Action

## Experiences & Ideas

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# Agenda

- Use at WHIV-LPFM New Orleans
- Updates re: <https://turbozone.org> – Ruff Cutz Radio
- Piano Capture
- Thank You to Developers!

## 102.3 WHIV-FM

- New Orleans Social Justice Radio Station
- Using Liquidsoap for Stream Encoding & Archive
- Commodity Hardware
- Pacifica Network

# Turbozone.org - History & Context

- Ruff Cutz Ethical Music Collective
  - Band & Collective
  - Practice Space
  - New Orleans, LA
- Sharing MP3 Files
  - Distribution
  - Easy to Access
  - Works-in-Progress
- Radio Station Creation
  - Continuous
  - Randomized
  - Contextualization

# Turbozone.org - Infrastructure

- Liquidsoap
  - Songs
  - Bumpers
  - Shows
- Digital Ocean
  - HTTP Server (Apache, turbozone.org website)
  - Icecast
  - Liquidsoap

```
bumpers = playlist(mode="randomize",
    reload=1, reload_mode="watch",
    "/home/ruffcutter/ruffcutz/bumpers/")

tracks = playlist(mode="randomize",
    reload=1, reload_mode="watch",
    "/home/ruffcutter/ruffcutz/tracks/")

radio = rotate([bumpers, tracks])

sundayStream = switch([ ({0h - 17h}, radio), ({17h - 17h45m}, jpShows),
mondayStream = switch([ ({0h - 17h}, radio), ({17h - 17h45m}, jpShows),
tuesdayStream = switch([ ({0h - 17h}, radio), ({17h - 17h45m}, jpShows),
wednesdayStream = switch([ ({0h - 17h}, radio), ({17h - 17h45m}, jpShows),
thursdayStream = switch([ ({0h - 17h}, radio), ({17h - 17h45m}, jpShows),
fridayStream = switch([ ({0h - 0h45m}, ralphShows), ({0h45m - 17h}, radio),
saturdayStream = switch([ ({0h - 17h}, radio), ({17h - 17h45m}, jpShows),

stream = switch([ ({0w}, sundayStream),
    ({1w}, mondayStream),
    ({2w}, tuesdayStream),
    ({3w}, wednesdayStream),
    ({4w}, thursdayStream),
    ({5w}, fridayStream),
    ({6w}, saturdayStream) ])

output.icecast(%mp3,
    host = "localhost", port = 8000,
```

# “Radio Station As Artifact” - Alternative Distribution

- No Commitment to Release
- Extensibility
  - More Commercials
  - More Artists
  - Shows
  - Live Broadcasts
- Synchronous & Communal Listening
- Licensing Issues avoided by using Own Work

# “Radio Station As Artifact” - Alternative Distribution

- WWOZ Local Model
  - Community!
  - Local Performance Information
  - Listener & Artist Focus
- Prior Art
  - Queens of the Stone Age - Songs for the Deaf
  - Other Examples: [https://www.reddit.com/r/LetsTalkMusic/comments/apfvk9/albums\\_that\\_imitate\\_or\\_include\\_radio\\_broadcast/](https://www.reddit.com/r/LetsTalkMusic/comments/apfvk9/albums_that_imitate_or_include_radio_broadcast/)
- Infrastructure as Art / “Medium Is the Message”
  - <http://myfreedownloads.info>



# Turbozone.org - Room for Growth

- Modernization
  - HLS
  - Storage
  - Hardening
- Licensing Concerns
- Additional Shows
- Additional Artists
- Live Broadcast/Performance
- TV? 90s/00s-era MTV
- App for consumption
- Community Building

# Additional Thoughts & Personal Interest

- Using FCC Part 15 FM Transmitter for “FM Frequency”
  - Rolls HR70
  - <https://www.rolls.com/product/HR70>
  - Hyperlocal FM signal, global IP signal
- Using Liquidsoap to Deploy Emergency Messaging
- **Purpose Built-Devices**
  - [Boss Guitar Pedal](#)
  - [Raspberry-Pi](#)
- **Piano & Guitar Capture**
- “What kind of fun am I interested in having, and how does this technology support this?”
- School FM

# Piano Capture - What? Why?

- Elevation of Practice
- Idea of Audience
- Capture of Ephemeral Performance
- Extensibility
- System Building...
- Creation of artifacts/experiences from raw capture...

# Piano Capture

- Listen to piano
- Record sounds
- Upload to [Archive.org](https://archive.org) ([nws.piano.capture](https://nws.piano.capture))
- Generate Show
- Schedule on Turbozone.org

# Piano Capture



# Piano Capture

- Yamaha CP70
  - Sound Source
  - Line-Out
- Digidesign MBox
  - USB Audio Interface
- Raspberry Pi 4B
  - Running Liquidsoap

# Piano Capture

## Currently Working:

- Piano Recording, Blank Detection, File Generation
- File Uploading to [Archive.org](https://archive.org)

## In Progress:

- Creation of “Recent” and “Random” shows using clips, text-to-speech, scheduling on Turbozone.org

# Thank You!

- Developers
- Presenters
- Friends
- Listeners