

Airshifter Handbook

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Contents

I. Introduction	2
History of Community Radio, LPFM, and WRFU	2
Community vs. Public Radio	3
II. WRFU: Organization Basics	3
WRFU Mission Statement	3
Station Profile: Who we are and What we do	3
Membership: How to join	4
Consensus-Based Governance	4
General Station Meetings: Keep informed and propose ideas	5
Programming Groups: Getting airtime for your show	5
Working Groups: Running and improving the station	5
Urbana-Champaign Independent Media Center (UC-IMC)	6
Resources and other groups	6
Oversight: IMC Steering Group	7
Summary: How to get a show and be a part of WRFU	7
III. Federal Communications Commission (FCC) Guidelines for Radio	8
Station Log: Sign every time you broadcast	8
Station Identification (IDs): Every hour	8
Emergency Alerts	8
Disclaimer	9
Content Restrictions	9
FCC Resources/Links	10
IV. In the Studio and On the Air	10
Studio Checklist and Rules	10
Public Service Announcements (PSAs)	11
Program Logs	11
Program Substitutions: What to do when you cannot be present	11
Radio Production Basics	11
Tips for a Good Show	12
How WRFU Works: Audio signal path	13

I. Introduction

A SHORT HISTORY OF COMMUNITY RADIO, LPFM, AND WRFU

From the time that regular radio broadcasting began around 1920, commercial stations have dominated U.S. airwaves. Non-commercial broadcasting did not really start until FM radio became feasible after the Second World War. In the post-war years, the Federal Communications Commission (FCC) decided to reserve space on the FM dial for non-commercial stations.

The first FM community radio station was founded by journalist Lewis Hill in Berkeley, California in 1946. He and a group of radio professionals, pacifists, and others incorporated as the Pacifica Foundation and began working to make a radio station dedicated to "a lasting understanding between nations and between the individuals of all nations, creeds, and colors ... [and] to ... the full distribution of public information."

Pacifica decided that its station would not accept advertising. Instead, it would rely on donations from listeners. After three hard years of fundraising, KPFA signed onto the air in Berkeley on April 15, 1949. It is still on the air as the nation's oldest listener-sponsored station.

During the 1950s FM radio was mostly ignored by broadcasters. A number of college-based stations went on the air, and some commercial broadcasters applied for FM licenses, if only to rebroadcast their "main" AM station. The Pacifica Foundation thrived and built two more community stations:

KPFK (Los Angeles) in 1959 and WBAI (New York) in 1960.

In the 1960s interest grew in building more community radio stations. Volunteers built KRAB-FM in Seattle in 1962. KRAB allowed anyone on the air, played just about anything that anyone brought to the studio (within FCC limitations, of course), and brought the general concept of diversity on the airwaves to life.

The 1970s brought dramatic growth to community radio. Listener-supported, volunteer-driven stations went on the air in almost every state. It is also the decade during which the National Federation of Community Broadcasters (NFCB) was founded. The NFCB represents community radio stations that have joined together to exchange information and programming, lobby the government, and generally advance the cause of non-commercial community radio.

In 1978 the FCC elected to discontinue issuing licenses for FM stations at power levels under 100 watts. This change of policy basically raised the price of building a licensed radio station, and in the process removed access to the airwaves from those with the least means. Media activists and many others recognized that the power of local radio as a community information tool was great. Some began setting up low power FM radio stations without licenses, as acts of electronic civil disobedience against what they saw as an unjust restriction against localism and community radio.

In 2000 – partially due to pressure generated by the unlicensed microradio movement – the FCC reinstated licensing for low power FM (LPFM) radio stations. This was a move that both commercial broadcasters and National Public Radio lobbied to stop, unsuccessfully. In 2001 the FCC accepted applications for new LPFM radio stations. Locally, the Socialist Forum of Champaign County applied for an LPFM station license to serve Champaign-Urbana. In 2003 the FCC granted a construction permit to build WRFU.

WRFU commenced broadcasts on November 13, 2005, and strives to carry on the traditions of community radio's early founders and enthusiasts. WRFU is one of about 1,000 new LPFM stations lucky enough to navigate the FCC licensing process.

(Sections of the above were originally published in the volunteer handbook of WEFT.)

COMMUNITY VS. PUBLIC RADIO

Community radio and public radio are both reactions to the profit-driven programming that has resulted from corporate control of commercial radio. Both are classified by the government as forms of "public broadcasting" and therefore subject to similar FCC guidelines.

Generally, public radio stations are connected both physically and financially to colleges and universities, or to large public broadcasting entities. Public stations are generally run by professional staffs and receive a large amount of financial support from corporate and foundation donations. Almost all public radio stations receive programs from, or are members of, the National Public Radio network, and run NPR-produced programs.

Community radio stations, in contrast, are generally based directly in the community they serve. Most stations are owned by nonprofit organizations whose directors are elected by the station's listeners, by volunteers working at the station, or both.

Community stations are financed in large part by listener donations. Most of the airtime on community stations is filled with locallyproduced programming. Community stations also differ from public radio by putting greater importance on serving those underserved by other stations.

II. WRFU: Organization Basics

STATION PROFILE

The Socialist Forum of Champaign County officially holds the license to WRFU, but in reality the station is a joint project between the Socialist Forum and the Urbana-Media Center Champaign Independent (www.ucimc.org). This is because, at the time that the FCC was taking applications for LPFM stations, the IMC was still being After the FCC granted WRFU's founded. construction permit, the Socialist Forum and IMC signed an agreement making WRFU a fiscally-sponsored project of the IMC, which as a 501(c)(3) incorporated entity enjoys not-

WRFU MISSION STATEMENT

WRFU is a progressive radio station collective committed to social justice, focusing on public affairs issues and the arts. WRFU airs opinions and debates in an open and diverse forum that focuses on educating and empowering the public. WRFU provides an accessible venue for an eclectic mixture of arts programming.

for-profit status.

MEMBERSHIP:

How to Join

Because WRFU is a project of the IMC and uses IMC resources (like the building where the station is housed), those involved with WRFU are by extension members of the IMC. Membership in the IMC costs a sliding scale of \$25-50 per year, and WRFU dues are an additional \$18 per year. Thus the minimum yearly dues payment required of WRFU volunteers is \$43.

WRFU membership must be renewed and dues paid each September. It is hoped that these yearly dues will cover the basic operational costs for the entire station. Members of the IMC and WRFU are also encouraged to donate to and raise money for the Tower Fund, which will pay for the construction of a new permanent radio tower that will extend the broadcast range of the station.

Nobody is turned away if they cannot pay dues. As members of the IMC, all WRFU volunteers enjoy access to the bountiful information and media creation resources that the IMC provides, and are free to fully participate in all IMC decision-making.

CONSENSUS-BASED GOVERNANCE

WRFU operates on the principle of consensus-based governance. Unlike majority-rule, consensus requires general agreement among all parties to a decision before action can be taken. Consensus empowers every person involved in a decision-making process to move or stop the process at any time until *all* are satisfied with its outcome. Sometimes consensus seems a bit intimidating to those

unfamiliar with it; that's okay – consensus is nothing if not a learning process.

Here is a brief overview of consensus governance as it applies to the way station volunteers direct the operation and decisions of WRFU:

- 1. Station meetings (see next section) and mailing lists are open to the public. If volunteers are interested in proposing a project or idea, they present their proposals to the group over mailing lists and at meetings.
- 2. Before each station meeting, the group decides democratically on who will facilitate the meeting and who will take notes. Anyone can volunteer to be facilitator or note-taker for a meeting and these roles change every meeting.
- 3. The facilitator makes sure that the meetings address any concerns or proposals of station volunteers, by leading the group through agenda items until everything has been discussed and decisions made.
- 4. If there are disagreements about a proposal, these concerns are discussed one by one until the group as a whole can reach agreement. Concerns cannot block a decision from being made unless the concerns are that a decision being proposed contradicts the mission and goals of WRFU or the IMC. Decisions that have been blocked will go to the monthly IMC Steering meeting (also public) for resolution.
- 5. Decisions are made public, but only after the whole group has reached agreement.

GENERAL MEETINGS:

KEEP INFORMED AND PROPOSE IDEAS

WRFU holds general meetings on the first Tuesday of every month, at 8PM, and on the third Saturday of every month, at 1PM. These days have been chosen by the membership to accommodate the different schedules of volunteers. Meetings are held at the IMC unless otherwise advertised. They typically do not last more than an hour. Anyone is welcome to attend and participate in general meetings. Minutes from these meetings are posted on **RFU** mailing (http://lists.chambana.net/cgi-bin/listinfo/rfu). All members are encouraged to participate in station business by attending general meetings and signing up for the WRFU e-mail list.

PROGRAMMING GROUPS:

GETTING AIRTIME AND TRAINING FOR YOUR SHOW

Slots for airtime are not given out to individual people: they are awarded to programming groups. Programming groups consist of two or more people; all must undergo the training required of on-air volunteers.

Training typically consists of one session followed by a "test flight" with a station volunteer who has already been through the training process. Training sessions are offered to all members in two parts: 1) a guided lesson on operating studio equipment with an explanation of the *studio checklist*; and 2) a discussion on the organizational structure of WRFU/IMC and an overview of FCC policies and restrictions. After a volunteer has completed station training, they will be fully informed on how to put on a show and how to participate as members.

You can be a member of up to two programming groups. Programming groups have complete flexibility to decide who they will divide up their airtime among themselves. At least one member of every programming group should attend a station meeting every month to keep up-to-date on station business.

WORKING GROUPS:

RUNNING AND IMPROVING THE STATION

Working groups divide up the major responsibilities of running WRFU. During your training you will be asked which working group(s) you are interested in helping. Currently there are 5 working groups:

FINANCE: Raises money for the station, through public events, grants, donation drives, and merchandise sales.

OUTREACH: Spreads the word about the station in the Champaign-Urbana area; works on building membership, managing the WRFU website (www.wrfu.net), and advertising shows.

MEMBERSHIP and TRAINING: Manages schedule of shows and programming, collects station dues, trains volunteers, and updates training materials and handbooks.

TECH: Responsible for the engineering operations of WRFU; maintains transmitter, antenna, studio and production equipment, and plans all equipment replacement, upgrades, installations, and purchases.

AUTOMATION: Responsible for programming those parts of WRFU's schedule that are NOT live. Selects and schedules programming for non-live segments. Maintains station automation playlist (local music library,

public affairs news feeds and podcasts, and remote/on-location broadcasts).

Contact the RFU mailing list for information on how to get involved in a working group. Each group has its own mailing list and generally meets after the Saturday 1PM general station meetings. If you identify a need that isn't being served by one of the current working groups, you can always propose your own!

Getting involved with one or more working groups will greatly enhance your experience of community radio and independent media. You will learn new skills, serve the local public, and have chances to shape the direction of WRFU.

URBANA-CHAMPAIGN INDEPENDENT MEDIA CENTER (UC-IMC):

The WRFU-LP 104.5FM community radio station is one project of many at the UC-IMC. The IMC is a grassroots organization committed to using media production and distribution as tools for promoting social and economic justice in the Champaign County area. We foster the creation and distribution of media, art, and narratives emphasizing underrepresented voices and perspectives and promote empowerment and expression through media and arts education.

To this end, the IMC owns and operates a Community Media and Arts Center housed in the historic downtown Urbana post office building located at 202 S. Broadway Ave at Elm Street. The center includes a stage and concert venue, the WRFU radio station, a multimedia production room, art studios, library, bike co-op, Books to Prisoners pro-

gram, the *Public i* newspaper office, and meeting spaces. We are part of the Indymedia (www.indymedia.org) network - an affiliation of over 200 media centers across every continent.

Contact Info:

By mail: UC IMC, 202 South Broadway, # 100,

Urbana, IL 61801

By phone: 217-344-8820 By email:imc@ucimc.org Website: <u>www.ucimc.org</u>

IMC GROUPS AND RESOURCES

WRFU station members are encouraged to get involved with other IMC groups and to take advantage of the media resources and opportunities each group provides. Like WRFU, the IMC is organized into working groups which each have responsibility for different areas of the Center's operations. A good way to get involved is to attend a meeting for the working group that most interests you. All group meetings are open to the public and all groups are eager to accept new members! You can also sign up to be on any of the working lists groups' e-mail http://lists.chambana.net/.

Other IMC groups:

FINANCE: accounting and fundraising

SHOWS: concerts and live events; booking and staging

PRINT: writes & prints the *Public i* newspaper

TECH: computer networking, electronics, server and equipment maintenance

WEB: designs, updates, and edits IMC website

PRODUCTION: audio/video recording and editing projects to support other groups like WRFU and Print in creating independent media

BOOKS TO PRISONERS: sends free books to Illinois prisoners based on their requests

LIBRARIANS: builds and manages IMC's library and archive of media, including zines

THE BIKE PROJECT (Fiscally-sponsored): workspace, classes, and community for more bikes in Champaign-Urbana; learn to fix or build a bike

OVERSIGHT: IMC STEERING MEETINGS

The Steering Group is a special working group responsible for decisions that affect the entire radio station or IMC as a whole. These are decisions that generally have to do with legal, contractual, regulatory, or financial responsibility. Each IMC working group (including WRFU) appoints two spokespersons to represent the group at Steering meetings. Steering meetings are held on the first Thursday of every month at 8pm.

Participation in the Steering group is open to all WRFU members, and ideally should consist of one member from each of WRFU's working groups. While the Steering group deals with decisions that affect the entire station, the group does not have the power to force decisions on programming or working groups. However, if a group engages in activity that threatens the station's FCC license – like airing libelous or obscene programming – the Steering group is empowered to take appropriate steps to address the risk.

SUMMARY:

HOW TO GET A SHOW AND BE A PART OF WRFU

- 1. Attend a station meeting (every 1st Tuesday, 8pm and 3rd Saturday, 1pm) and propose your show idea.
- 2. Attend a station training session (these are scheduled based on availability and demand). Here you will receive instruction both inside the studio and outside, as well as your air-shifter handbook don't lose this!
- 3. Join WRFU and the IMC by completing three forms:
 - A. UC-IMC Membership Form
 - B. Program Form this outlines your radio programming group and its show
 - C. WRFU Training Form completed after your training session
- 4. Pay membership dues:

WRFU dues = \$18/year (paid in Sept.) IMC dues = \$25-50/year donation

- 5. Select a WRFU working group or groups that interest you [Finance, Outreach, Membership/Training, Tech, and Automation].
- 6. Discover the other IMC resources and working groups and make a great show welcome to community radio!

III. FCC Guidelines

In order to maintain its license to broadcast, WRFU must abide by several FCC regulations. The FCC gives licenses for eight-year terms, and licenses are not automatically renewed.

On-air volunteers undertake several responsibilities that are integral to WRFU keeping its FCC license in good standing. These include keeping required logs; station identification; emergency alerts; and abiding by the FCC's minimal content restrictions.

STATION LOG:

SIGN EVERY TIME YOU BROADCAST

The FCC requires WRFU to maintain a written record of station operation. This includes taking power measurements of the transmitter, recording times when the station goes on and off the air, etc. All on-air volunteers are required to sign on and off their shifts, and to take transmitter readings. You must document the time you went on the air, and when you went off-air. The actual process of log-keeping is covered in the mandatory training session and is relatively straightforward. In the event of any technical malfunction, contact one of the technical problem-solvers listed in the WRFU main studio.

TAKING TRANSMITTER READINGS

The transmitter uses watts of electricity to send the audio output of the studio mixer to RFU's radio tower. Any time an airshifter goes on-air, measurements of the power usage must be taken to comply with FCC guidelines. As a low-power FM radio station, RFU is allotted maximum permissible power distribution, but enough watts must be used in

order to broadcast effectively through Champaign-Urbana.

To take transmitter readings, use the in-studio desktop computer and follow these steps:

- 1. Log in using the "WRFU" account, NOT the "WRFU-user" account, which is incompatible with the NICOM transmitter monitoring software.
- 2. Once logged into the WRFU account, double-click the "CHECK TRANSMITTER" icon to open the transmitter monitor. Click the "ON" button in lower right corner if it is off.
- 3. You should see that the transmitter is broadcasting at 104.5MHz, indicated by red digits in the upper left corner. In the lower middle of this screen you will see two yellow meter boxes with numbers below each these are the numbers you must record in your station log entry. The first is power being sent from the tower, and the second is power being reflected.

STATION IDENTIFICATION (IDs):

AT THE TOP OF EVERY HOUR

The FCC requires all radio stations to identify themselves at the top of each hour (with a five-minute leeway on either side). You must either play one of the station's pre-recorded legal IDs or say the ID yourself. The ID must include the phrase, "WRFU-LP, Urbana" at a minimum. This is a very simple requirement, but one the FCC takes very seriously.

EMERGENCY ALERTS

The Emergency Alert System (EAS) receiver in the studio automatically activates whenever emergency messages are received from federal, state, or local authorities. Most of the time these messages are simply tests of the system, but the FCC requires WRFU to keep a log of EAS alerts, and to demonstrate that on-air volunteers know how to work EAS-related equipment. EAS alerts from the National Weather Service involving Champaign County must be rebroadcast. More information about EAS operation can be found in the WRFU main studio.

DISCLAIMER

As expressed in its Mission Statement, WRFU airs opinions and material in an open, public forum where free speech is respected and encouraged. If broadcast material does not violate FCC content restrictions (see below), the airing will be legal. However, certain legal statements made by airshifters or programming content aired by individuals may still cause controversy in the community or may contradict the positions of other WRFU and IMC volunteers. For these reasons, it is always a good idea to read the following disclaimer before airing any program on community radio:

"WRFU is an open forum for the Urbana-Champaign community. Views expressed are those of the speakers and do not represent WRFU, Urbana-Champaign Independent Media Center, or Urbana Socialist Forum."

CONTENT RESTRICTIONS

Although the FCC is constitutionally prohibited from restricting the flow of messages and ideas generally, courts have long been considered the broadcast medium to be distinct from other forms of public forum, and have

supported restrictions on certain kinds of content. These are summarized below:

OBSCENITY/PROFANITY/INDECENCY

The FCC bans the broadcast of obscene material at all times. Obscenity is defined as anything that appeals to the prurient interest, depicts or describes sexual conduct in terms patently offensive, and taken as a whole, lacks serious literary, artistic, political, or scientific value. Profanity refers to patently offensive words (think of the swearing lexicon). Indecency is much more difficult to define, but includes both profane expression and anything that depicts or describes, in patently offensive terms, sexual or excretory activities or organs. Content that includes indecent or profane material may only be aired between the hours of 10PM and 6AM ("safe harbor" hours). Programmers should air and advisory about content that contains an excessive amount of profanity/indecency before airing it.

SLANDER/LIBEL/INVASION OF PRIVACY

It is against the law to defame someone's character, to lie about them, or to invade their privacy. Doing so over the air opens the station to civil liability and may even result in an FCC fine. A common example of running afoul of FCC rules in this regard is the use of phone calls on the air. Participants in a phone call must be advised that they are either live on the air or being taped for later broadcast. Failure to do so can result in a hefty penalty.

NON-COMMERCIAL CONTENT RESTRICTIONS

You may describe a product, event, or service on the air, but you may not promote it. The FCC forbids advertising on non-commercial stations. Calls to action, like "come on down, call now, go check out this band," etc. qualify as promotional speech and are not allowed. Exemptions to this rule involve products/events/services directly related to the radio station, where funds collected by sale or attendance come back to WRFU. Public service announcements, which typically do not involve the advertisement of a product or service, are also permissible. Violating FCC regulations in this regard usually results in a heavy fine to the offending station.

POLITICAL EDITORIAL SPEECH

While the FCC is constitutionally forbidden from regulating political speech, WRFU – as part of registered non-profit organizations – is prohibited from taking formal positions on political issues and campaigns. On-air volunteers may speak or play their own politics to their heart's content, provided they do not portray it as representative of WRFU itself. The best way to avoid this is to preface political editorial content with a disclaimer, as described above. This disclaimer can be found in the WRFU studio, along with the legal station ID.

Important FCC Resources

For more information on low-power FM regulations:

http://www.fcc.gov/lpfm/

For more information on the FCC's policies regarding obscene, profane, and indecent broadcasting:

http://www.fcc.gov/eb/oip/FAQ.html#Th eLaw

For more information regarding the FCC's policies on non-commercial, educational broadcasting:

http://www.fcc.gov/mb/audio/nature

IV. In the Studio and On the Air

STUDIO CHECKLIST

When you enter the studio each time to broadcast your show, remember the following:

- 1. First, complete the Station Log, printing and signing your name, recording the time you begin and end, and noting the transmitter measurements, along with other pertinent information. The station log should be hanging on the wall above and to the left of the desktop computer.
- 2. Make sure that there are headphones plugged in for anyone who will be acting as DJ or interviewer during your show.
- 3. When you are ready to begin the show, select Program 1 & 2 for the microphone(s) you will be using. At this point, the studio speakers will automatically go mute and you will need headphones (and the mixer meters) to monitor your levels. Use the vertical faders to adjust your level. To listen to your broadcast as it will be heard by others outside the studio, make sure you have selected "AIR" on the Control and Headphone monitors.
- 4. At the beginning of your show and/or the top of every hour, say or play the legal station ID and any appropriate disclaimer.
- 5. Use the marked Line In, CD In (1&2), and Record Out channels to bring audio into and out of the mixer. When these are being used, make sure that Program 1&2 are selected otherwise you will not be broadcasting or recording from these tracks.

- 6. Fill out the equipment log to note the condition of the studio as you found it and any issues that arose during your show.
- 7. When done, sign out on the station log, turn off the mics and other inputs, and return the Automation fader (on Programs 1&2) to an appropriate level. Turn out the studio lights, and leave the speakers on a moderate to quiet level.

IN-STUDIO RULES

- 1. Only trained WRFU members may operate studio equipment.
- 2. Complete the Station Log every time you are on the air (FCC requirement).
- 3. Don't pack the space with people.
- 4. No drinking, smoking, or drugs.
- 5. Keep food and beverages (especially liquids!) away from the studio equipment.
- 6. Make sure the front interior entryway to the WRFU studios is locked at night.
- 7. Don't "borrow" station equipment (including music).
- 8. Please re-file music properly, to make finding it easier for everyone.
- 9. In the event of equipment malfunction: a) if an emergency, contact the Tech working group; b) if non-emergency, make a notation on the equipment log/in-studio trouble sheet.
- 10. The in-studio computer is a public workstation used by all WRFU volunteers. Take care of it and do not use it to store your own files or to view inappropriate and/or adult material.

PUBLIC-SERVICE ANNOUNCEMENTS (PSAs)

Occasionally you may be required to air a public service announcement, either by play-

ing something that's already been recorded or reading announcement copy yourself: the interruptions last less than a minute and you pass along valuable information in the process. Current PSAs in rotation at WRFU can be found on the station website at:

http://www.wrfu.net/psa/current

PROGRAM LOGS

If you are producing a music-oriented program, please make sure to fill out and submit a program log. Program logs are used to entice record labels to send WRFU free music. Sometimes these logs are used by music publishing companies to adjust artist royalty rates.

PROGRAM SUBSTITUTIONS:

WHEN YOU CANNOT BE PRESENT

If a programming group is unable to cover its assigned slot for any reason, it is the group's responsibility to contact the RFU mailing list and find a substitute to fill in. The substitute must be another WRFU volunteer – someone who has undergone WRFU's training process. Failure to find substitutes or otherwise skipping airshifts may force a programming group to forfeit its time slot.

RADIO PRODUCTION BASICS

- 1. Use headphones! Wearing headphones gives you a more accurate sense of how you and your program actually sound over the air. You should always wear headphones when mixing between two audio sources, or when speaking on the air.
- 2. Microphone placement Do not speak directly into the microphone instead, position

it slightly off to one side of your mouth (but pointing toward it). This will help soften hard consonant sounds (like the popping associated with P and the sizzle of an S) and will generally be easier on listener's ears.

- 3. Mixing audio Each audio component in the studio (microphone, CD player, turntable, computer, etc.) has its own assigned channel on the mixer. In order for an audio source to be broadcast, its channel must be engaged and turned up in volume through the mixer. If you press "play" on something and you do not hear what you expect, check the mixer to ensure that the proper channels are turned up.
- 4. Level control Watch the levels on the mixing board closely. Note how they hop and change with the volume level of whatever you are playing or saying. The key to maintaining a quality broadcast is to not let the levels stray "into the red" that is, keep the board needles at or just below the zero mark on the meter scale. Overly loud audio sounds distorted when broadcast, which listeners will tire of quickly.

TIPS FOR A GOOD SHOW

- 1. Arrive early for your program. Check for any new station announcements in the studio or on the web site that you may be required to read on-air. It helps to read through anything you might be required to play or say (PSAs, station promotions, and the like) before you actually do it. If you are selecting most of your programming from the station music library, it's essential to pull a fair selection before you actually begin broadcasting.
- 2. Make sure to check in with the volunteer who is on the air before you so that you know when they will be ending his or her program

and if there are any unexpected problems (studio equipment malfunctions, etc.) that may require you to change your show plans.

- 3. Shut off the microphones as soon as you've had your say. Unwanted utterances are a common mistake, and if they involve swearing they can end up being costly mistakes.
- 4. Speak clearly and try to prepare what you want to say in your mind before you open up the microphone. If you find yourself at a loss for words, talk about the station: upcoming shows, benefit events, or talk a little about your particular program. Listeners also don't mind a time and weather update now and then.
- 5. Sit up straight and keep your shoulders relaxed: posture affects your breath control. Experiment with your full vocal range listeners cannot see your face or any gestures you make as you talk, but you can convey some of that in the way you speak.
- 6. If you use a lot of music, make sure to keep up on your program log. Some volunteers pre-write program logs and simply copy the information in at the beginning or end of their programs. Additionally, it is much easier to clean up the studio after a show if you have periodically re-filed music from the station library throughout the broadcast.
- 7. Make a good effort to end your program on time: winding up too early or late is not fair to the volunteers who follow you.
- 8. Always refer to in-studio information (binders, checklist, and posted notices) to try to resolve an issue before calling for help. The in-studio manual and operations binder in particular are two resources where you will find valuable information on how studio

equipment operates, where and how to keep logs, etc.

- 9. If possible, record your program so that you can listen to it afterward. Self-critiques of your programming helps minimize mistakes; you are your harshest critic.
- 10. Listen to other programs on WRFU and feel free to lift any of the various techniques that you hear. Compare how various people approach the listening audience, and borrow from methods that seem comfortable to you.

How WRFU Works:

AUDIO SIGNAL PATH

Audio from mics, CD players, and other sources, is processed into an electrical signal which is fed out from the studio mixer to special equipment that processes the signal for broadcast. The output of the mixer is first sent to the EAS system, which can override any live or pre-programmed audio in the case of a local or national emergency. From here the audio is sent to a power amplifier (which must never be adjusted without Tech group supervision) and tuner. The signal enters the transmitter, where it is converted to radiofrequency (RF) energy. The RF energy travels from the transmitter to WRFU's antenna, where it radiates as an FM signal at 104.5MHz. Receivers tuned to this frequency pick up WRFU's signal and transform it back into an electrical impulse, which is then processed through a speaker which vibrates the air, recreating the original audio. This entire process takes places in a fraction of a second.