

**The University of Michigan
Amateur Radio Club**



Info Session and Station Tour

Fall 2007

Info session topics

- Intro to Amateur Radio and the Club
 - Chris (KA8WFC) and Lora (KC8UDG)
- Amateur Radio, NASA, and more
 - Dean Tony England (WØORE)
- W8UM Station Tour and Demo
 - “The shack”

Amateur Radio = “Ham Radio”

- Amateur Radio Operators are “Hams”
 - Term goes back to days of the telegraph (**Morse Code**) when a poor sender was “ham-fisted” (early wireless was all **telegraphy**)
- Hams have come from all walks of life
 - Engineers, business, trades, doctors, teachers, farmers, scientists, lawyers, journalist, senators and kings, men, women, kids, and **college students!**
- Just like broadcast radio stations, Hams are licensed by the FCC and have their own **call signs**

Radio is Magic!

- Hams share a common **fascination** with radio communication
 - We think it is amazing that you can create invisible radio waves that travel everywhere and through almost everything, and use them to talk to each other!
 - At least some part of us gets excited by **knobs**, **flashing lights**, and **big antennas**

Some Ham Activities

- Putting together and operating **your own radio station** and using it to talk to other Hams (**two-way** and not broadcasting, but not “CB” either)
- Space communication using **satellites**, talking to **astronauts**, and **E-M-E** (“moon bounce”)
- On-the-air radio **contests** (some just for schools)
- Proving **emergency** and **public service** communications
- Experimenting with **radio and electronics**
- Making **friends** around the world
- And LOTS MORE

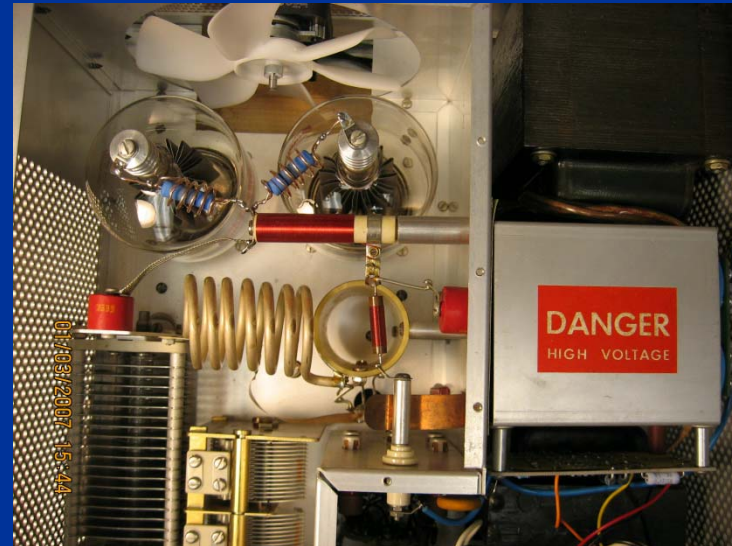
The Club

- We've been around since 1913
- U-M ham radio stations have occupied buildings all around campus
- Monthly meeting for club business and interesting presentations on Ham Radio topics
- Help students get (or upgrade) their FCC Amateur Radio Licenses

The W8UM Station

- The center of club activity
 - **Learning** how to use a Ham Radio station
 - Casual operating (nets, calling “CQ”, etc.)
 - Chasing “**DX**”
 - Competing in **contests** (by yourself or with many other club members)
 - **Building** things for yourself, the club station, or a student project or course
 - Just hanging out and socializing
- An incredible resource
 - We have **amazing** equipment, antennas, and our own tower on the **EECS** building (stay for the TOUR)

Activities



Some Technical Info

- Ham radio equipment spans a wide range
 - Modern, state-of-the-art technology (DSP and software-defined radio, 100+ GHz experimental equipment), all the way back to vacuum tubes
- Hams use a wide variety of modes
 - Voice, PC-based digital modes, Morse Code, even several types of Television
- We have allocations (by the FCC) all over the radio spectrum

Our New Tower and Antennas



The Ham "Bands"

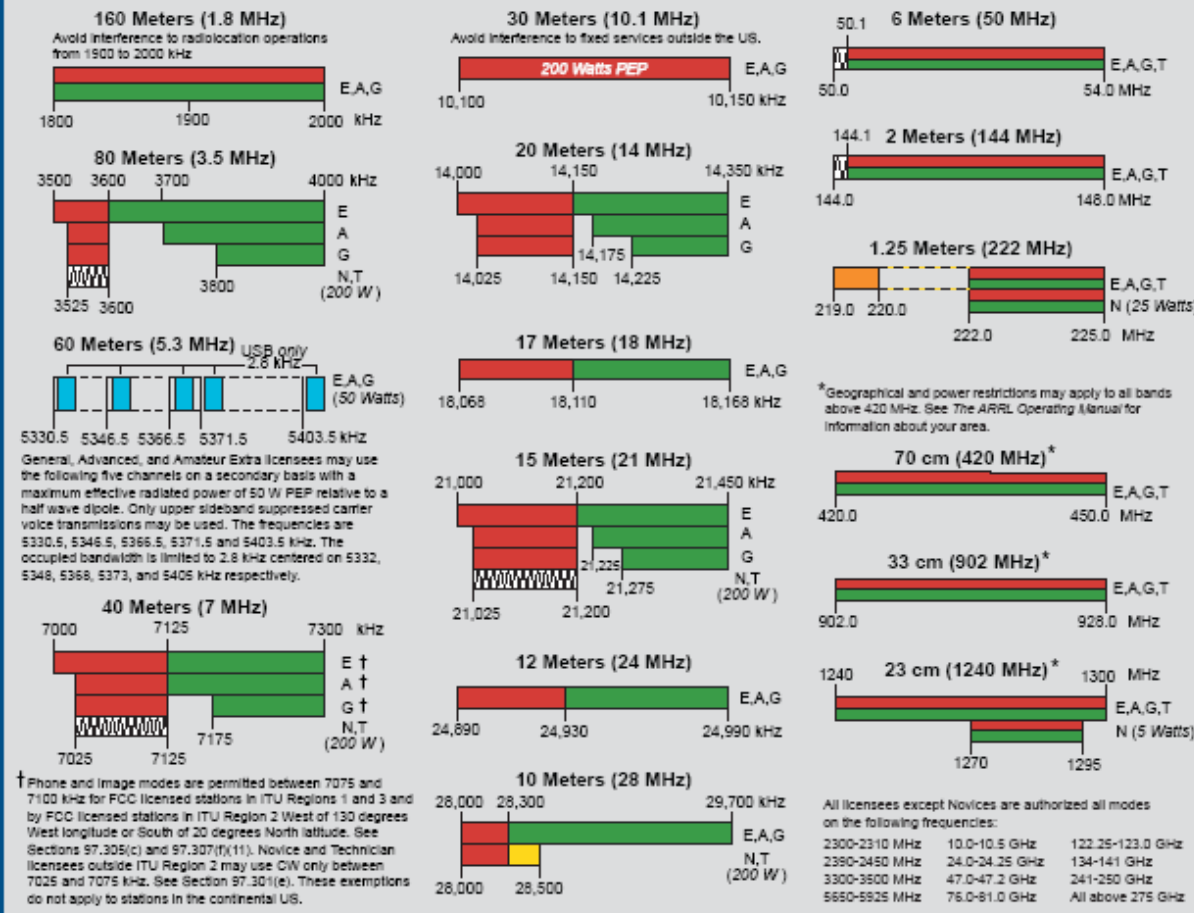
US Amateur Radio Bands

US AMATEUR POWER LIMITS

At all times, transmitter power should be kept down to that necessary to carry out the desired communications. Power is rated in watts PEP output. Except where noted, the maximum power output is 1000 Watts.

Effective Date
February 23, 2007

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www.arrl.org
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KEY

Note:
CW operation is permitted throughout all amateur bands except 60 meters.
MCW is authorized above 50.1 MHz, except for 219-220 MHz.
Test transmissions are authorized above 51 MHz, except for 219-220 MHz.

- = RTTY and data
- = phone and image
- ▨ = CW only
- = SSB phone
- = USB phone only
- = Fixed digital message forwarding systems only

E = Amateur Extra
A = Advanced
G = General
T = Technician
N = Novice

See ARRLWeb at www.arrl.org for more detailed band plans.

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Why Join the Club?

- A once-in-a-lifetime opportunity
 - **W8UM** is a world-class Ham Radio station just for club members
- Everyone needs an “**Elmer**”
 - Learn how to operate a Ham Radio station
 - Get your own FCC Amateur Radio License (and call sign)
 - Why read a book when you’ve got EE students (and professors) bending over backwards to explain how radio works?

Be a Leader...It's Your Club!

- **President:** Calls and runs meetings, interfaces with the University and students
- **Vice president:** Helps run the show (and gets ready to be president)
- **Treasurer:** Handles the money
- **Secretary:** Takes minutes, does PR and correspondence
- **Station Manager:** Keeps **W8UM** in top shape, creates policies, helps others learn how to use the equipment

How do I join?

1. Fill out an application
2. Pay \$20 dues

That's it!



Stick around!

- At the end of the Info Session we are going upstairs to **W8UM** and will give a demo of the station's capabilities and answer any of your questions one-on-one
- Q&A, comments, and introductions...