

Radio Communications Essentials

Module 3: Federal Communications Commission
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Our Topics

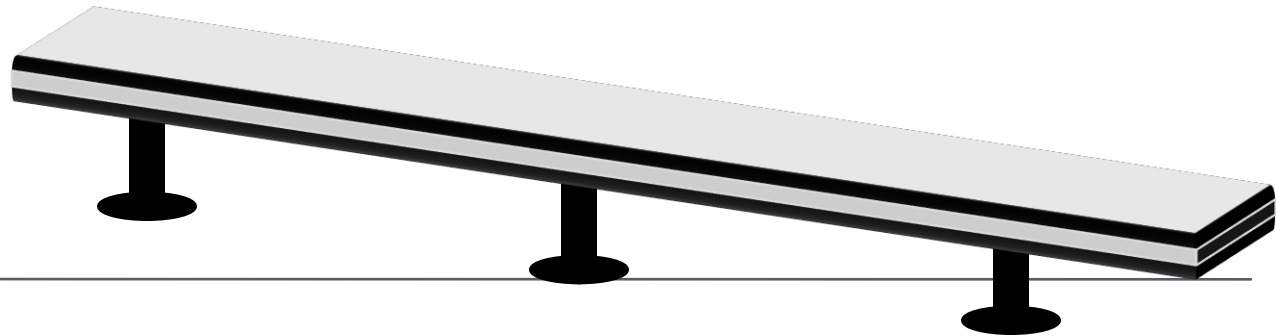
1. FCC License Requirements
 2. Purpose of FCC Licenses
 3. Steps to License
 4. Frequency Coordination
 5. FCC Compliance
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What is the FCC?

- Manages the use of radio spectrum
 - TV, Radio, Amateur, Repeaters

Husker Analogy

- Think of radio spectrum like a bleacher.
- Radio licenses are the seat tickets.
- FCC sells you the ticket, sets the rules.



The Radio Spectrum "Bleachers"

UNITED STATES FREQUENCY ALLOCATIONS THE RADIO SPECTRUM

RADIO SERVICES COLOR LEGEND

AEROMOBILITY MOBILE	INTER-SATELLITE	RADIO HISTORY
AEROMOBILITY MOBILE SATELLITE	LAND MOBILE	GEOSTATIONARY SATELLITE
AERONAUTICAL RADIOLOCATION	LAND MOBILE SATELLITE	RADIO LOCATION
MARITIME	MARITIME MOBILE	RADIOLOCATION SATELLITE
AMATEUR SATELLITE	MARITIME MOBILE SATELLITE	RADIOCOMMUNICATION
BROADCASTING	MARITIME RADIOCOMMUNICATION	RADIOCOMMUNICATION SATELLITE
BROADCASTING SATELLITE	METEOROLOGICAL AIDS	SPACE OPERATION
EARTH-ORBITING SATELLITE	METEOROLOGICAL SATELLITE	SPACE RESEARCH
FIXED	MOBILE	STANDARD FREQUENCY AND TIME SIGNAL
FIXED SATELLITE	MARINE SATELLITE	STANDARD FREQUENCY AND TIME SIGNAL SATELLITE

ACTIVITY CODE

GOVERNMENT EXCLUSIVE	GOVERNMENT/ NON-GOVERNMENT SHARED
NON-GOVERNMENT EXCLUSIVE	

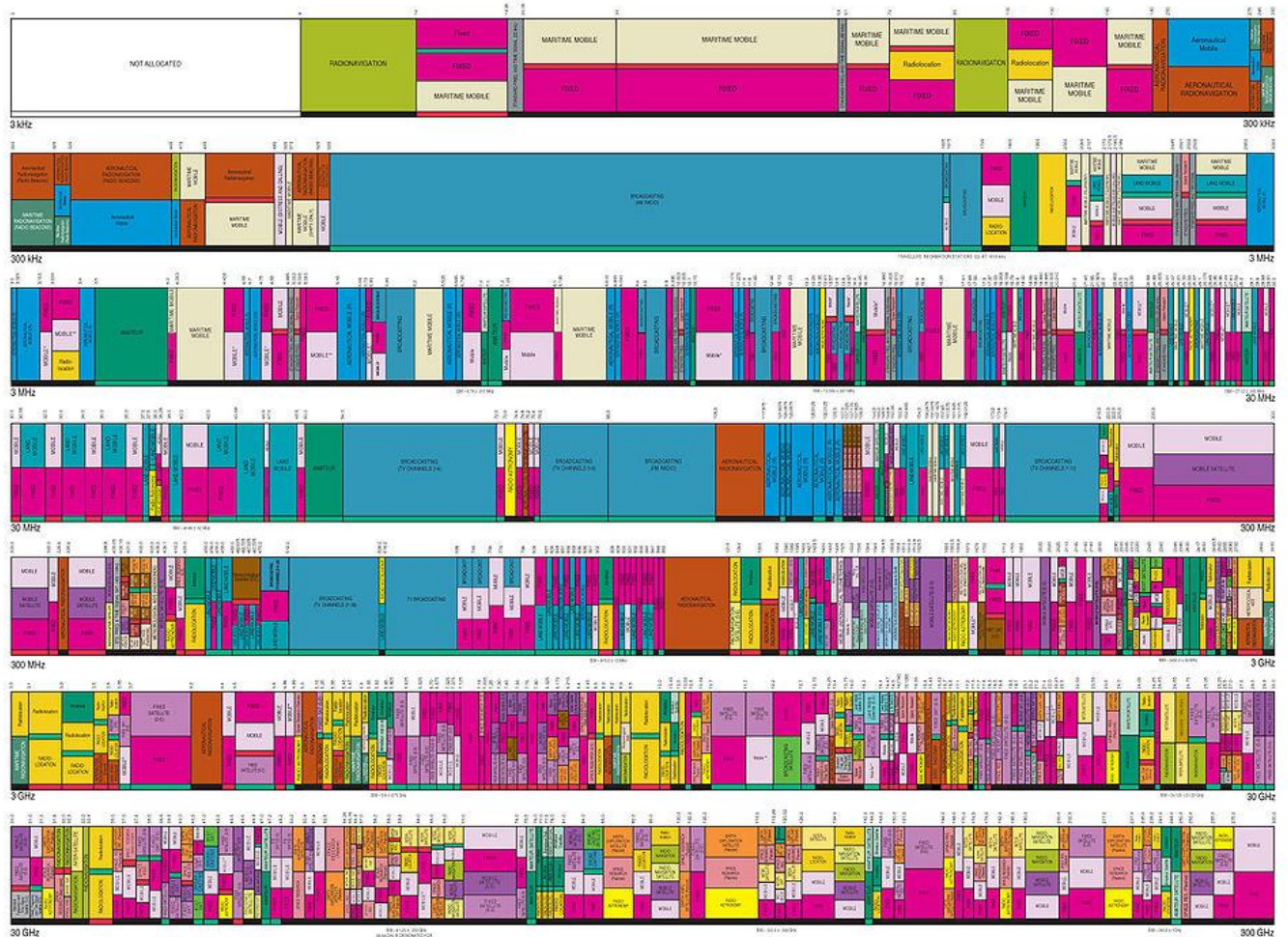
ALLOCATION USAGE DESIGNATION

SERVICE	EXAMPLE	DESCRIPTION
Primary	F2XZ	Capital Letters
Secondary	M3B	1st Capital with lower case letters

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U.S. DEPARTMENT OF COMMERCE
National Telecommunications and Information Administration
Office of Spectrum Management
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PLEASE NOTE: THE SPECTRA ALLOTTED THE SERVICES IN THE GRID THIS CHART IS A SUMMARY OF THE SERVICES IN THE GRID. THIS CHART IS NOT A SUBSTITUTE FOR THE NATIONAL TABLE OF FREQUENCY ALLOCATIONS.

THE RADIO SPECTRUM

FCC License Requirements

- A license is the permission to broadcast
 - Designate frequency & bandwidth
 - Modulation, height of transmitter
 - Effective radiating power
-

Purpose of FCC Licenses

- Organize the use of radio spectrum.
- Avoid interference with neighboring areas.
- Document frequency, bandwidth, range, and use of radio spectrum.
- Reserves areas of the spectrum for certain functions.

Husker Analogy

- Keeps the students in the student section
 - Provides box seats for others
 - Keeps you from taking too many seats
-

Steps to License

- Use the Universal Licensing System (online)
 - wireless.fcc.gov/uls/index.htm
 - You must have a FCC Registration Number (FRN)
 - Know the radio band, range, fixed/mobile, etc.
 - Fill out the application
 - Get help if you need
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Frequency Coordination

- Certified by FCC
- Recommend frequencies.
- Applications must include a showing of frequency coordination.

Husker Analogy

- FCC sells you a ticket
 - Frequency Coordinator assigns you a seat.
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FCC Compliance

- License details and restrictions
 - Narrowbanding – Jan 01 2013
 - License your control stations
 - Operating rules & regulations
 - Official business traffic only
 - Commercial broadcasting
 - Regular station ID
 - No obscenities
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Review

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