Peak Area Leadership in Science

Professional Development Opportunities for Secondary Science Teachers

Three Ways to RSVP:

- www.sciencehubs.org
- email: RSVP@sciencehubs.org
- call Tammy Johnnie at (719) 337-1552

Amateur Radio

February 13, 2018
4:00-8:00 pm

Discovery Canyon Campus
1810 Northgate Blvd, Colorado Springs, CO 80921
Room 411

Highlights

- Modern developments of Amateur Radio
- Amateur Radio for Community Service
- How to support your physical science courses with amateur radio
- How far can I talk?

Bring the following items:

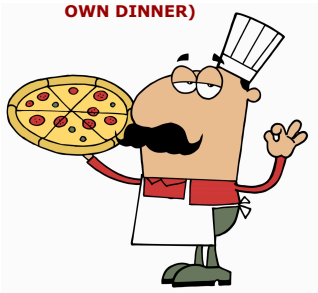
- your science notebook
- PALS provides a free science notebook at your first meeting of the year !

Don't miss this opportunity to:

- expand your knowledge of science content, teaching pedagogy, and/or enjoyment of all things science!
- earn college credit or document professional development clock hours.
- network with other Pikes Peak Region science teachers.
- acquire new resources and/or walk away with teacher materials.

DINNER, SNACKS & WATER/POP PROVIDED

(IF YOU HAVE DIET RESTRICTIONS, YOU MIGHT WANT TO BRING YOUR OWN DINNER)



This workshop is possible because of GENEROUS funding provided by:

FOUNDATION MIKKELSON

and The Mikkelson Education Fund

Providing Support for Teachers to Improve Technical Knowledge and Skills

Find us on Like

Search for Peak Area Leadership in Science
***We post professional development opportunities through our Facebook page*!**
Check out our website at www.sciencehubs.org

Photo at top provided by Rose DiCenso.

In compliance with Colorado School of Mines regulations, children of participants may not attend Hub meetings or activities.

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 ***1500 Watts***.

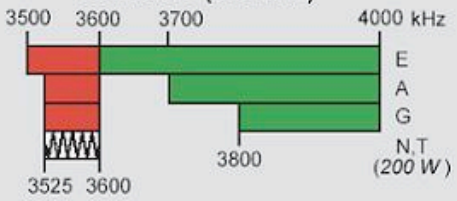
Effective Date
February 23, 2007

Published by:
ARRL The national association for AMATEUR RADIO
www.arrl.org
225 Main Street, Newington, CT USA 06111-1494

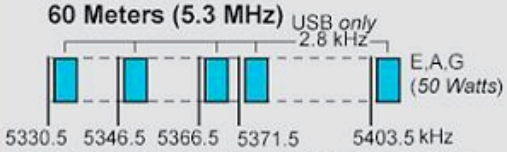
160 Meters (1.8 MHz)

Avoid interference to radiolocation operations from 1900 to 2000 kHz

80 Meters (3.5 MHz)

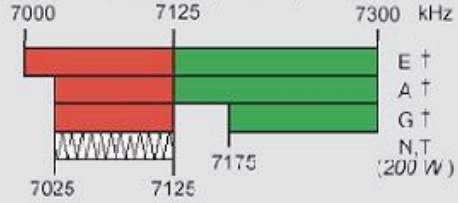


60 Meters (5.3 MHz)



General, Advanced, and Amateur Extra licensees may use the following five channels on a secondary basis with a maximum effective radiated power of 50 W PEP relative to a half wave dipole. Only upper sideband suppressed carrier voice transmissions may be used. The frequencies are 5330.5, 5346.5, 5366.5, 5371.5 and 5403.5 kHz. The occupied bandwidth is limited to 2.8 kHz centered on 5332, 5348, 5368, 5373, and 5405 kHz respectively.

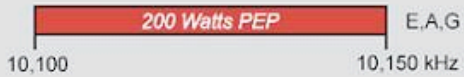
40 Meters (7 MHz)



† Phone and image modes are permitted between 7075 and 7100 kHz for FCC licensed stations in ITU Regions 1 and 3 and by FCC licensed stations in ITU Region 2 West of 130 degrees West longitude or South of 20 degrees North latitude. See Sections 97.305(c) and 97.307(f)(11). Novice and Technician licensees outside ITU Region 2 may use CW only between 7025 and 7075 kHz. See Section 97.301(e). These exemptions do not apply to stations in the continental US.

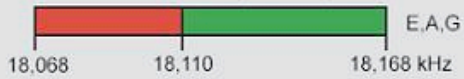
30 Meters (10.1 MHz)

Avoid interference to fixed services outside the US.



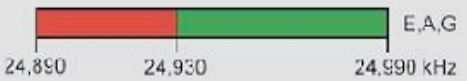
20 Meters (14 MHz)

17 Meters (18 MHz)

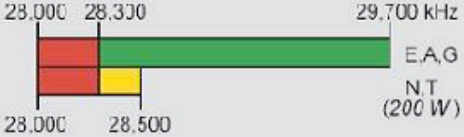


15 Meters (21 MHz)

12 Meters (24 MHz)



10 Meters (28 MHz)



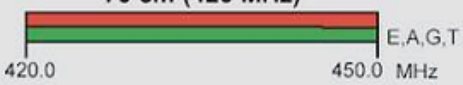
6 Meters (50 MHz)

2 Meters (144 MHz)

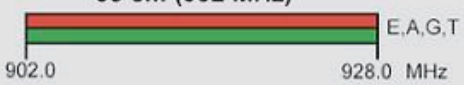
1.25 Meters (222 MHz)

*Geographical and power restrictions may apply to all bands above 420 MHz. See *The ARRL Operating Manual* for information about your area.

70 cm (420 MHz)*



33 cm (902 MHz)*



23 cm (1240 MHz)*

All licensees except Novices are authorized all modes on the following frequencies:

2300-2310 MHz	10.0-10.5 GHz	122.25-123.0 GHz
2390-2450 MHz	24.0-24.25 GHz	134-141 GHz
3300-3500 MHz	47.0-47.2 GHz	241-250 GHz
5650-5925 MHz	76.0-81.0 GHz	All above 275 GHz

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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