

# JOTA/JOTI 2024

Connect with people in scouting all over the world  
Oct 18,19,20

## Activities:

**Treasure Hunt**

**Battleships** over radio

**Lego** over radio

**Radio Fox Hunt**

**HF radio** contacts with other scouts from all over the world

**VHF radio** contacts with people from all over the region

**UHF radio** contacts with people from around the city

**Digital Radio** contacts with other scouts from all over the world

**Morse Code Radio** contacts

Learn about: Weather radio, Marine radio, The Ionosphere, and more

# Radio Scouting

## **Activities we can bring to you:**

**Battleships** over radio,

**Lego** over radio

**Radio Fox Hunt**

**HF radio** contacts with other scouts from all over the world

**VHF radio** contacts with people from all over the region

**UHF radio** contacts with people from around the city

**Digital Radio** contacts with other scouts from all over the world

**Morse Code Radio** contacts

**Radio nets**

**Badge work**

Learn about: Weather radio, Marine radio, The Ionosphere, and more

# **Treasure Hunt**

## Activity: b,c,s,v,r,l,p

- Goals: Have Fun, see neat things at the museum
- There is a different treasure hunt for Beaver, Cubs, Scouts, Venturers.
- Leaders and parents can do the same treasure hunt as the Venturers

# **Battleships over radio**

## **Sections: c,s,v,r,l,p**

- Goals: Have Fun, Learn how to communicate effectively over radio
- Equipment supplied by us:
  - Radios, playing field sheets
- Supplied by you
  - Pencils, and writing surface (table, book, etc)
  - Two locations far enough apart, they have to use the radios
- This is the classic game of Battles ships, but with an 8X10 grid to make the game go a little faster. The grid uses the phonetic alphabet, the grid used at location 1 is different from location 2
- The players cannot see each other, and have to use UHF radios to communicate

# **Lego over radio**

## **Activity: b,c,s,v,r,l,p**

- Goals: Have Fun, Learn how to communicate effectively over radio
- Equipment supplied by us:
  - Radios, lego set
- Supplied by you
  - Two locations far enough apart, they have to use the radios  
Player 1 is in one room, and player 2 is in another room.
- Player 1 has a item made out of Lego, and has to give instructions to player 2, so that player 2 can build the item. All instruction are given over the UHF radios

# Radio Fox Hunt

Activity: c,s,v,r,l,p

- Goals: Have Fun, Learn about radio
- Equipment supplied by us:
  - Radios
- Outdoor event, dress appropriately
- Radio transmitters (FOXes) are hidden on the scout grounds
- Players use radio receivers with directional antennas to hunt down and find the FOXes (transmitters)

# **HF Radio** contacts with other scouts from all

Activity: b,c,s,v,r,l,p

- Goals: Have Fun, Learn how to communicate effectively over radio
- Equipment supplied by us:
- HF radios bounce their signals off of the ionosphere, and can reach anywhere in the world.
- Players will be able to talk to other people in scouting from around the world.
- Players will get a certificate for this activity, as well as the coveted 2024 JOTA crest

# **VHF radio** contacts with people from all

Activity: b,c,s,v,r,l,p

- Goals: Have Fun, Learn how to communicate effectively over radio
- Equipment supplied by us:
  - Radios
- The VHF radios will bounce their signals off of repeaters in the Ottawa/ Gatineau area ~100 km radius
- Players can talk to other people in scouting from all around this area

# **UHF radio** contacts with people from around the city

Activity: b,c,s,v,r,l,p

- Goals: Have Fun, Learn how to communicate effectively over radio
- Equipment supplied by us:
  - Radios
- Players will be able to talk to people from the local area
- UHF radios use Line of sight Propagation

# **Digital Radio** contacts with other scouts from all over the world

Activity: c,s,v,r,l,p

- Goals: Have Fun, Learn how to communicate effectively over radio
- Equipment supplied by us:
  - Radios
- Players will be able to communicate with people from around the world
- Several digital mode will be used, including:
  - FT8, FT4, WSPR, APRS

# Morse Code Radio contacts

Activity: b,c,s,v,r,l,p

- Goals: Have Fun, Learn how to communicate effectively over radio
- Equipment supplied by us:
  - Radios, keys or paddles, oscillators
- Supplied by you
  - Pencils, paper. and a writing surface (table, book, etc)
- Players can experience morse code in several different ways
  - Using practice code oscillators
  - Doing low power over the air communications
  - Using HF radios to communicate to people from all over the world

# JOTI – Jamboree on the Internet

## Activity: b,c,s,v,r,l,p

- Goals: Have Fun
- Equipment supplied by us:
  - Computers, software, and internet connection
- Players will be able to communicate to other people in scouting from around the world, over the secure web system created for this event
- Voice, Text and Video communication will be possible

# WSPR – Weak Signal Propagation Reporting System

Display: c,s,v,r,l,p

- WSPR – is a digital communication system that automatically send out very low power signals (~2W)
- These signals go all around the world, and are picked up by other amateur radios operators.
- The contacts are then reported to the internet. and displayed on a website

## CB radio

Display: b,c,s,v,r,l,p

- CB radios are unlicensed low power radios
- They are still used today
- They have many fun uses

# Weather radio

Display: b,c,s,v,r,l,p

- In north America weather information is transmitted over VHF am radio
- This information is very useful to people hiking, canoeing, and doing activities in the wilderness

# Marine Radio

Display: b,c,s,v,r,l,p

- Marine Radio is a must for anyone on the water
  - Large commercial ships to canoeists use marine radio to stay safe on the water

# APRS – Automatic Packet reporting system

## Display: c,s,v,r,l,p

- This digital system send out packets over VHR radio repeaters
- Digipeaters distribute the packets over the world
- Igates take the packets from the air and puts them on the internet
- Websites display the data

## Q-Codes

### Display c,s,v,r,l,p

- Q-codes are used by radio operators as a short cut for common phrases
- It is useful when doing voice communications, but is an absolute must for CW(morse code) communications

# **Radio Spectrum**

Display: c,s,v,r,l,p

- Radio frequencies are decided up into bands and are allocated for different uses
- They display shows how the frequencies are divided up

# **Hamclock**

Display: c,s,v,r,l,p

- This system running on a raspberry PI tell you every thing that you wanted to know about radio propagation and current state of the ionosphere, but were afraid to ask.

A	•—	N	—•	1	•—•—•
B	—••	O	—•—	2	••—•—
C	—•••	P	•—••	3	••—•—
D	—••	Q	—•—•	4	•••—
E	•	R	•—•	5	••••
F	••—•	S	•••	6	—•••
G	—••	T	—	7	—•—••
H	••••	U	•—•	8	—•—••
I	••	V	••—•	9	—•—••
J	•—•—	W	•—•	0	—•—•—
K	—•—	X	—•—•	.	•—•—•—
L	••—•	Y	—•—•	,	—•—•—
M	—•—	Z	—•—••	?	••—•—•

A	•—	N	—•	1	•—•—•
B	—••	O	—•—	2	••—•—
C	—•••	P	•—••	3	••—•—
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F	••—•	S	•••	6	—•••
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J	•—•—	W	•—•	0	—•—•—
K	—•—	X	—•—•	.	•—•—•—
L	••—•	Y	—•—•	,	—•—•—
M	—•—	Z	—•—••	?	••—•—•

A	•—	N	—•	1	•—•—•
B	—••	O	—•—	2	••—•—
C	—•••	P	•—••	3	••—•—
D	—••	Q	—•—•	4	•••—
E	•	R	•—•	5	••••
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H	••••	U	•—•	8	—•—••
I	••	V	••—•	9	—•—••
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A	•—	N	—•	1	•—•—•
B	—••	O	—•—	2	••—•—
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D	—••	Q	—•—•	4	•••—
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