The AhaBulb Party Game

STUFF EVERY HAM RADIO OPERATOR SHOULD KNOW

How to play (30 seconds)

1. The reader reads a card and its three answers out loud.
2. Everyone says "One, two, three, Goldilocks!" and holds up 1, 2, or 3 fingers.
3. The reader flips the card and reads the answer and the Why.
4. Everyone who was right takes a point.
5. The reader reads the joke with a straight face. Anyone laughs or groans? The reader takes a point. Nobody got it right? The reader takes a point.
6. Pass the deck left. Most points when the points run out wins.

What you need

These cards and the point tokens on the last two pages. No tokens? Use coins, buttons, pebbles, or marshmallows. 3 to 10 players, ages 8 and up.

Expert rule: Bet It

Before the reader flips the card, you may put one of your points on your answer. Right: take your normal point plus one extra. Wrong: your bet goes back to the pile. That's it.

Printing

Print single-sided, on cardstock if you have it. Cut on the dashed lines. Each card is a 3.5 x 5 inch index card. The answer half is upside down on purpose, so the table can't peek.

Cards 1 to 50 of 341. More cards and the free daily online game at sesk.info. Built 2026-10-14.

HAM RADIO

Which of these is prohibited for amateur radio operators?

A International contacts on VHF and higher bands

B Willful or malicious interference

C Third-party traffic using digital modes

FLIP FOR THE ANSWER

B Willful or malicious interference

WHY Hams may never deliberately interfere with other stations. Talking to other countries on VHF and passing third-party messages by digital modes are both allowed under the right conditions.

STRAIGHT FACE
What do you call a ham who keys up over everyone? A real transmission problem.

SESK.INFO #408

HAM RADIO

Which agency makes and enforces the rules for amateur radio in the United States?

A The FCC

B The ARRL

C Homeland Security

FLIP FOR THE ANSWER

A The FCC

WHY The Federal Communications Commission writes and enforces the ham radio rules, found in Part 97. The ARRL is a big ham club, not a government regulator.

STRAIGHT FACE
Why did the ham go to the FCC office? He wanted to clear the air.

SESK.INFO #407

HAM RADIO

Which frequency is inside the 6-meter amateur band?

A 52.525 MHz

B 49.00 MHz

C 28.50 MHz

FLIP FOR THE ANSWER

A 52.525 MHz

WHY The 6-meter band runs from 50 to 54 MHz, so 52.525 MHz fits. 28.50 MHz is 10 meters, and 49.00 MHz is just below the band.

STRAIGHT FACE
Six meters is called the magic band, but I still can't make my homework disappear.

SESK.INFO #410

HAM RADIO

Where can a Technician use voice (phone) on the 10-meter band?

A 28.050 to 28.150 MHz

B 28.500 to 28.600 MHz

C 28.300 to 28.500 MHz

FLIP FOR THE ANSWER

C 28.300 to 28.500 MHz

WHY Technicians get a small voice segment on 10 meters, from 28.300 to 28.500 MHz. The lower part of their 10 meter privileges is for CW and data.

STRAIGHT FACE
Why did the ham bring a ruler to the radio? To measure his 10 meters.

SESK.INFO #409

HAM RADIO

What is the maximum PEP output for a Technician in their HF band segments?

A 200 watts

B 100 watts

C 50 watts

FLIP FOR THE ANSWER

A 200 watts

WHY FCC rules cap Technicians at 200 watts peak envelope power on their HF segments. Hams should always use the minimum power needed anyway.

STRAIGHT FACE
Why was the radio so calm? It had its power under control.

HAM RADIO

Except for special cases, what is the max PEP output for Technicians above 30 MHz?

A 500 watts

B 1500 watts

C 100 watts

FLIP FOR THE ANSWER

B 1500 watts

WHY Above 30 MHz, Technicians can generally run up to 1500 watts PEP, the legal maximum for all hams. A few bands and situations have lower limits.

STRAIGHT FACE
How does a ham lift weights? With 1500 watts of power.

HAM RADIO

Which amateur band includes the frequency 146.52 MHz?

A 6 meters

B 2 meters

C 70 centimeters

FLIP FOR THE ANSWER

B 2 meters

WHY The 2-meter band covers 144 to 148 MHz, so 146.52 MHz lands there. 6 meters is around 50 MHz and 70 centimeters is around 440 MHz.

STRAIGHT FACE
My friend said 2 meters is a short band. I told him it is still taller than me.

HAM RADIO

On which HF band does a Technician have voice (phone) privileges?

A None at all

B 80, 40, 15 and 10 meters

C 10 meters only

FLIP FOR THE ANSWER

C 10 meters only

WHY Technicians can send CW on parts of 80, 40 and 15 meters, but voice on HF is allowed only on 10 meters. Upgrading to General opens much more HF phone.

STRAIGHT FACE
Why did the Technician only talk on 10 meters? Everywhere else he had to keep it short and dotty.

HAM RADIO

For which amateur license classes does the FCC currently issue new licenses?

- **A** Novice, Technician, General, Amateur Extra
- **B** Technician, Technician Plus, General, Amateur Extra
- **C** Technician, General, Amateur Extra

FLIP FOR THE ANSWER

C **Technician, General, Amateur Extra**

WHY New hams can only earn Technician, General or Amateur Extra today. Older classes like Novice and Advanced can be renewed by existing holders, but no new ones are issued.

STRAIGHT FACE
Why did the ham study so hard? He wanted to be in a class of his own.

SESK.INFO #415

HAM RADIO

Who may pick a call sign they want under the FCC vanity call sign rules?

- **A** Any licensed amateur
- **B** Only General or Amateur Extra licensees
- **C** Only hams licensed for more than 10 years

FLIP FOR THE ANSWER

A **Any licensed amatеur**

WHY Any licensed ham can apply for a vanity call sign. Higher classes just get to choose from shorter call sign groups.

STRAIGHT FACE
Why did the ham get a vanity call sign? He wanted to look good on the air.

SESK.INFO #416

HAM RADIO

How long before it expires can you ask to renew your amateur radio license?

- **A** 30 days
- **B** 90 days
- **C** 1 year

FLIP FOR THE ANSWER

B **90 days**

WHY The FCC lets you request renewal up to 90 days before your license expires. Renewing early keeps you on the air without a gap.

STRAIGHT FACE
Why do hams renew early? They hate dead air.

SESK.INFO #417

HAM RADIO

What is the normal term of an FCC amateur radio license?

- **A** Five years
- **B** Life
- **C** Ten years

FLIP FOR THE ANSWER

C **Ten years**

WHY An amateur license is normally granted for 10 years. You can renew it again and again without retesting.

STRAIGHT FACE
My ham license lasts ten years. My goldfish should be so lucky.

SESK.INFO #418

HAM RADIO

What are the rules about indecent or obscene language on amateur radio?

- **A** It is all prohibited
- **B** The FCC keeps a list of banned words
- **C** There is no such rule

FLIP FOR THE ANSWER

A **It is all prohibited**

WHY Part 97 bans obscene or indecent words or language on the air. There is no official list of words, so hams simply keep it clean.

STRAIGHT FACE
My radio has a clean mouth. It only uses CQ words.

SESK.INFO #422

HAM RADIO

Which kind of one-way transmission is prohibited for amateur stations?

- **A** Morse code practice
- **B** Telemetry or telecommand
- **C** Broadcasting

FLIP FOR THE ANSWER

C **Broadcasting**

WHY Ham radio is not for broadcasting, meaning transmissions intended for the general public. Some one-way transmissions, like Morse code practice and telemetry, are allowed.

STRAIGHT FACE
Why can't hams run a radio show? They are not allowed to broadcast their talents.

SESK.INFO #421

HAM RADIO

After passing your first ham exam, when may you start transmitting?

- **A** Right after you get your exam completion certificate
- **B** When your grant appears in the FCC license database
- **C** When your license arrives in the mail

FLIP FOR THE ANSWER

B **When your grant appears in the FCC license database**

WHY A new ham must wait until the license shows up in the FCC Universal Licensing System. The exam certificate alone is not enough for a first license.

STRAIGHT FACE
Why did the new ham keep refreshing the FCC website? He was waiting for a sign.

SESK.INFO #420

HAM RADIO

What is the grace period for renewing an amateur license after it expires?

- **A** Two years
- **B** Five years
- **C** Ten years

FLIP FOR THE ANSWER

A **Two years**

WHY You have two years after expiration to renew without retesting. You may not transmit until the license is actually renewed.

STRAIGHT FACE
Why did the expired ham stay quiet? He was on his best behavior during grace.

SESK.INFO #419

HAM RADIO

When may an amateur station transmit without a control operator?

- **A** When using automatic control, like a repeater
- **B** Never
- **C** When it is an auxiliary station

FLIP FOR THE ANSWER

B Never

WHY Every amateur station that transmits must have a control operator. Even an automatically controlled repeater has a control operator responsible for it.

STRAIGHT FACE
Who is in charge of the repeater? The control freak, I mean control operator.

SESK.INFO #423

HAM RADIO

What determines the frequencies a ham station may transmit on?

- **A** The frequencies printed on the license
- **B** The highest license held by anyone present
- **C** The control operator's license class

FLIP FOR THE ANSWER

C The control operator's license class

WHY The control operator's license class sets the station's transmitting privileges. A Technician at an Extra's station still only gets Technician privileges.

STRAIGHT FACE
Why did the Technician stay in his lane? His privileges said so.

SESK.INFO #424

HAM RADIO

When must you transmit your assigned call sign?

- **A** Every 10 minutes and at the end of a contact
- **B** Every 15 minutes and at the end of a contact
- **C** Once at the start, then every 10 minutes

FLIP FOR THE ANSWER

A Every 10 minutes and at the end of a contact

WHY FCC rules say to identify at least every 10 minutes during a communication and at the end of it. You do not have to ID at the start.

STRAIGHT FACE
Why did the ham keep saying his name? He had a 10-minute memory.

SESK.INFO #425

HAM RADIO

What language must you use for station identification on voice (phone)?

- **A** Any language recognized by the ITU
- **B** English
- **C** English, French or Spanish

FLIP FOR THE ANSWER

B English

WHY When you identify by voice, your call sign must be given in English. You may talk in other languages, but the ID itself is in English.

STRAIGHT FACE
Why did the ham take English class? He wanted to identify better.

SESK.INFO #426

HAM RADIO

What is a common repeater offset on the 2-meter band?

- **A** Plus or minus 5 MHz
- **B** Plus or minus 1 MHz
- **C** Plus or minus 600 kHz

FLIP FOR THE ANSWER

C **Plus or minus 600 kHz**

WHY Most 2-meter repeaters listen 600 kHz above or below where they transmit. On 70 centimeters the common offset is 5 MHz.

STRAIGHT FACE
Why was the repeater so balanced? It always kept a 600 kHz offset.

SESK.INFO #427

HAM RADIO

What is the national FM simplex calling frequency on 2 meters?

- **A** 146.520 MHz
- **B** 145.000 MHz
- **C** 446.000 MHz

FLIP FOR THE ANSWER

A **146.520 MHz**

WHY 146.520 MHz is the national 2-meter FM simplex calling frequency. Make contact there, then move to another frequency to chat.

STRAIGHT FACE
Why is 146.52 so popular? Everyone calls it.

SESK.INFO #428

HAM RADIO

How should you answer a station calling CQ?

- **A** Your call sign, then their call sign
- **B** CQ, then their call sign
- **C** Their call sign, then your call sign

FLIP FOR THE ANSWER

C **Their call sign, then your call sign**

WHY Say the other station's call sign first so they know you mean them, then give your own. CQ means calling any station.

STRAIGHT FACE
Why did the ham answer CQ so fast? He did not want to seek you later.

SESK.INFO #429

HAM RADIO

What do hams call transmitting and receiving on the same frequency?

- **A** Simplex
- **B** Full duplex
- **C** Multiplex

FLIP FOR THE ANSWER

A **Simplex**

WHY Simplex means both stations talk and listen on one frequency, without a repeater. A repeater receives on one frequency and transmits on another.

STRAIGHT FACE
Why do hams like simplex? It keeps things simple.

SESK.INFO #430

HAM RADIO

What does the reverse function on a VHF/UHF radio let you do?

A Listen on a repeater's output frequency

B Listen on a repeater's input frequency

C Reduce power output

FLIP FOR THE ANSWER

B Listen on a repeater's input frequency

WHY Reverse swaps your transmit and receive frequencies, so you hear what goes into the repeater. If you can hear a station directly, you may be able to switch to simplex.

STRAIGHT FACE
Why did the ham hit the reverse button? He wanted to back up his signal.

SESK.INFO #431

HAM RADIO

What is the sub-audible tone sent with your voice to open a repeater's squelch called?

A DTMF

B Carrier squelch

C CTCSS

FLIP FOR THE ANSWER

C CTCSS

WHY CTCSS is a low tone sent under your voice. The repeater only opens when it hears the right tone, which keeps out unwanted signals.

STRAIGHT FACE
The repeater would not let me in. I guess I had the wrong tone.

SESK.INFO #432

HAM RADIO

What type of repeater signaling uses two audio tones at the same time?

A DTMF

B CTCSS

C D-STAR

FLIP FOR THE ANSWER

A DTMF

WHY DTMF means dual-tone multi-frequency. Each keypad button sends two tones at once, just like a telephone keypad.

STRAIGHT FACE
Why did the ham dial so happily? Every button had two tones of fun.

SESK.INFO #433

HAM RADIO

Which Q signal means you are changing frequency?

A QSL

B QSY

C QRZ

FLIP FOR THE ANSWER

B QSY

WHY QSY means changing frequency. QSL means I acknowledge receipt, and QRZ asks who is calling me.

STRAIGHT FACE
Why did the ham QSY? The frequency was getting too crowded for his jokes.

SESK.INFO #434

HAM RADIO

What is RACES?

- **A** A short radio contest, also called a sprint
- **B** A mix of ham and CB emergency operators
- **C** An FCC amateur service for civil defense emergency communications

FLIP FOR THE ANSWER

C An FCC amateur service for civil defense emergency communications

WHY RACES is the Radio Amateur Civil Emergency Service. Hams work with civil defense agencies, and the operators must be certified by a civil defense organization.

STRAIGHT FACE
Why did the new ham bring running shoes to RACES?
He thought it was a contest.

SESK.INFO #435

HAM RADIO

What is standard practice when you take part in a radio net?

- **A** Transmit only when net control directs you
- **B** Give your name and street address when checking in
- **C** Record the time of each transmission

FLIP FOR THE ANSWER

A Transmit only when net control directs you

WHY Net control runs the net. Unless you have an emergency, wait to be called before you transmit, so everything stays orderly.

STRAIGHT FACE
Why was the net so organized? Net control had everyone in line.

SESK.INFO #436

HAM RADIO

Can a control operator ever transmit outside their license privileges?

- **A** No, never
- **B** Yes, only when life or property is in immediate danger
- **C** Yes, but only as part of a FEMA plan

FLIP FOR THE ANSWER

B Yes, only when life or property is in immediate danger

WHY In a true emergency where life or property is at immediate risk, a ham may use any means to get help, even outside their privileges.

STRAIGHT FACE
Why did the ham keep a flashlight in the radio shack? For emergency lighting, and emergency joking.

SESK.INFO #437

HAM RADIO

Why can VHF signal strength change a lot when you move your antenna a few feet?

- **A** Water vapor levels change along the path
- **B** The Doppler effect shifts the frequency
- **C** Multipath propagation cancels or reinforces signals

FLIP FOR THE ANSWER

C Multipath propagation cancels or reinforces signals

WHY Signals bounce off buildings and hills and reach you by different paths. Depending on where your antenna is, those copies add together or cancel out.

STRAIGHT FACE
Why did the ham keep dancing? He was chasing a better signal.

SESK.INFO #438

HAM RADIO

What does the ham radio term picket fencing mean?

- **A** Rapid flutter on mobile signals from multipath
- **B** Taking turns transmitting in a net
- **C** A ground system for vertical antennas

FLIP FOR THE ANSWER

A Rapid flutter on mobile signals from multipath

WHY When a car moves, it passes through spots where reflected signals add and cancel. The result is a fast flutter, like running a stick along a fence.

STRAIGHT FACE
My radio started picket fencing. Now it wants a white one with a gate.

SESK.INFO #439

HAM RADIO

Which region of the atmosphere can reflect HF radio waves?

- **A** The troposphere
- **B** The ionosphere
- **C** The stratosphere

FLIP FOR THE ANSWER

B The ionosphere

WHY The ionosphere is a layer high in the atmosphere charged by the sun. It bends HF signals back to Earth, letting them travel very long distances.

STRAIGHT FACE
Why does the ionosphere make a great friend? It always reflects on what you said.

SESK.INFO #440

HAM RADIO

As a radio wave's frequency increases, what happens to its wavelength?

- **A** It gets longer
- **B** It stays the same
- **C** It gets shorter

FLIP FOR THE ANSWER

C It gets shorter

WHY Radio waves all travel at the speed of light. So when more waves pass each second, each one has to be shorter.

STRAIGHT FACE
Why are high-frequency waves so short? They never have time to grow.

SESK.INFO #441

HAM RADIO

What is the formula for approximate wavelength in meters?

- **A** 300 divided by frequency in MHz
- **B** Frequency in MHz divided by 300
- **C** Frequency in hertz times 300

FLIP FOR THE ANSWER

A 300 divided by frequency in MHz

WHY Wavelength in meters is about 300 divided by the frequency in megahertz. For example, 150 MHz works out to about 2 meters.

STRAIGHT FACE
Why did the ham love math? Because 300 over anything is a good wavelength.

SESK.INFO #442

HAM RADIO

What frequency range is called VHF?

- **A** 300 MHz to 3000 MHz
- **B** 30 MHz to 300 MHz
- **C** 3 MHz to 30 MHz

FLIP FOR THE ANSWER

B 30 MHz to 300 MHz

WHY VHF, very high frequency, covers 30 to 300 MHz. HF is 3 to 30 MHz, and UHF is 300 to 3000 MHz.

STRAIGHT FACE
Why was VHF so confident? It was very high on itself.

HAM RADIO

What propagation often causes occasional strong signals on 10, 6 and 2 meters from beyond the horizon?

- **A** Backscatter
- **B** Gray-line propagation
- **C** Sporadic E

FLIP FOR THE ANSWER

C Sporadic E

WHY Sporadic E happens when patches of the ionosphere's E region suddenly get dense enough to reflect higher frequencies. It can bring in surprise long-distance signals.

STRAIGHT FACE
Why is sporadic E so hard to plan for? It never sends a calendar invite.

HAM RADIO

What causes tropospheric ducting?

- **A** Temperature inversions in the atmosphere
- **B** Sunspots and solar flares
- **C** Lightning discharges

FLIP FOR THE ANSWER

A Temperature inversions in the atmosphere

WHY A temperature inversion is warm air sitting over cooler air. It can trap VHF and UHF signals in a duct, carrying them hundreds of miles.

STRAIGHT FACE
Why did the radio wave take the duct? It wanted to avoid traffic.

HAM RADIO

Why is the VHF and UHF radio horizon farther than the visual horizon?

- **A** Radio waves move faster than light
- **B** The atmosphere bends radio waves slightly
- **C** Radio waves are not blocked by dust

FLIP FOR THE ANSWER

B The atmosphere bends radio waves slightly

WHY The atmosphere bends radio waves a little, so they follow Earth's curve a bit farther than light does. That stretches the radio horizon past what you can see.

STRAIGHT FACE
Why did the radio wave bend? It wanted to see over the horizon.

HAM RADIO

Why use short, heavy-gauge wires for a radio's DC power connection?

- **A** To avoid RF interference
- **B** To match the power supply impedance
- **C** To minimize voltage drop when transmitting

FLIP FOR THE ANSWER

C To minimize voltage drop when transmitting

WHY A radio pulls lots of current when it transmits. Thin or long wires waste voltage, so short, thick wires keep the voltage up.

STRAIGHT FACE
Why did the thin wire quit? It could not handle the current pressure.

SESK.INFO #447

HAM RADIO

Where should a mobile radio's negative power lead connect in a vehicle?

- **A** At the 12-volt battery chassis ground
- **B** To any metal part of the vehicle
- **C** Through the radio's mounting bracket

FLIP FOR THE ANSWER

A At the 12-volt battery chassis ground

WHY Connect the negative lead where the battery is grounded to the chassis. Random metal or a mounting bracket can give poor connections and noise.

STRAIGHT FACE
Why did the mobile radio go to the battery? It needed some positive and negative influences.

SESK.INFO #448

HAM RADIO

What happens when microphone gain is set too high on SSB?

- **A** Increased SWR
- **B** Distorted transmitted audio
- **C** Frequency instability

FLIP FOR THE ANSWER

B Distorted transmitted audio

WHY Too much mic gain overdrives the transmitter, making your voice sound harsh and distorted. Turn it down until your audio is clean.

STRAIGHT FACE
Why did the microphone get in trouble? It turned up the gain without asking.

SESK.INFO #449

HAM RADIO

In a US three-wire 120 V AC cable, what does black wire insulation mean?

- **A** Neutral
- **B** Equipment ground
- **C** Hot

FLIP FOR THE ANSWER

C Hot

WHY In US household wiring, black is the hot wire, white is neutral, and green or bare is ground. Treat black as live and dangerous.

STRAIGHT FACE
Why did the black wire get all the attention? It was the hottest one there.

SESK.INFO #450

HAM RADIO

What type of radiation are radio signals?

- **A** Ionizing radiation
- **B** Gamma radiation
- **C** Non-ionizing radiation

FLIP FOR THE ANSWER

C Non-ionizing radiation

WHY Radio waves do not have enough energy to cause chemical changes in cells or damage DNA. Ionizing radiation, like X-rays and gamma rays, does.

STRAIGHT FACE
Why did the radio wave stay calm? It was non-ionizing, it does not get charged up.

SESK.INFO #453

HAM RADIO

What is the minimum safe distance from a power line when installing an antenna?

- **A** Half a wavelength at the operating frequency
- **B** If it falls, it stays 10 feet from the wires
- **C** The height of the power line

FLIP FOR THE ANSWER

B If it falls, it stays 10 feet from the wires

WHY Plan so that if the antenna falls, no part of it can come within 10 feet of power lines. Contact with power lines can be deadly.

STRAIGHT FACE
Why did the antenna keep its distance? It did not want any shocking news.

SESK.INFO #452

HAM RADIO

What hazard comes from touching an antenna while it is transmitting?

- **A** Exposure to ionizing radiation
- **B** RF burn to skin
- **C** Electrocution

FLIP FOR THE ANSWER

B RF burn to skin

WHY A transmitting antenna can carry high RF voltage. Touching it can cause a painful burn, so keep antennas where people cannot reach them.

STRAIGHT FACE
Why don't hams high-five their antennas? They hate getting burned.

SESK.INFO #455

HAM RADIO

Who must make sure no one is exposed to RF energy above FCC limits?

- **A** The station licensee
- **B** The FCC
- **C** Anyone near the antenna

FLIP FOR THE ANSWER

A The station licensee

WHY The licensee is responsible for keeping RF exposure within FCC limits. That includes re-evaluating the station whenever the transmitter or antenna system changes.

STRAIGHT FACE
Why did the ham measure his backyard? He was checking his RF neighborhood watch.

SESK.INFO #454

HAM RADIO

A difference in what causes electrons to flow in a circuit?

- **A** Capacitance
- **B** Voltage
- **C** Inductance

FLIP FOR THE ANSWER

B Voltage

WHY Voltage is like water pressure in a hose. A difference in voltage between two points pushes electrons through the circuit.

STRAIGHT FACE
Why did the battery feel so confident? It had a positive outlook and plenty of potential.

HAM RADIO

Electrical current is measured in which unit?

- **A** Amperes
- **B** Volts
- **C** Watts

FLIP FOR THE ANSWER

A Amperes

WHY Current is the flow of electrons through a circuit, and we count it in amperes. Volts measure electrical push and watts measure power.

STRAIGHT FACE
Why are electricians always so well informed? They keep up with current events.

1
AhaBulb POINT

1
AhaBulb POINT