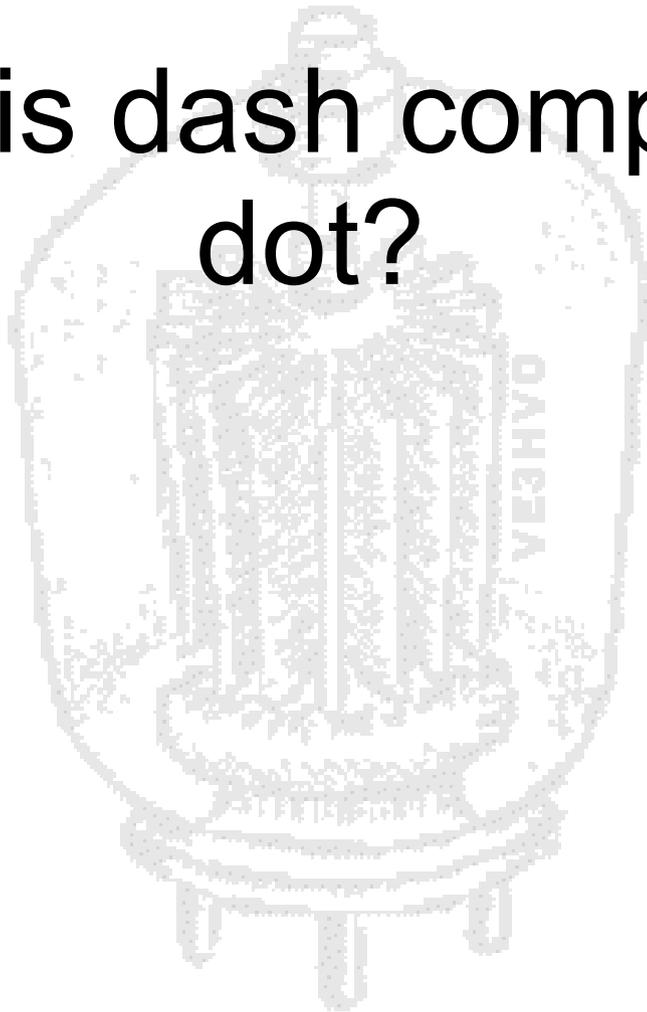


# KWARC QUIZ!

What is the Standard  
International Phonetic for the  
letter L?

Love  
London  
Luxembourg  
Lima

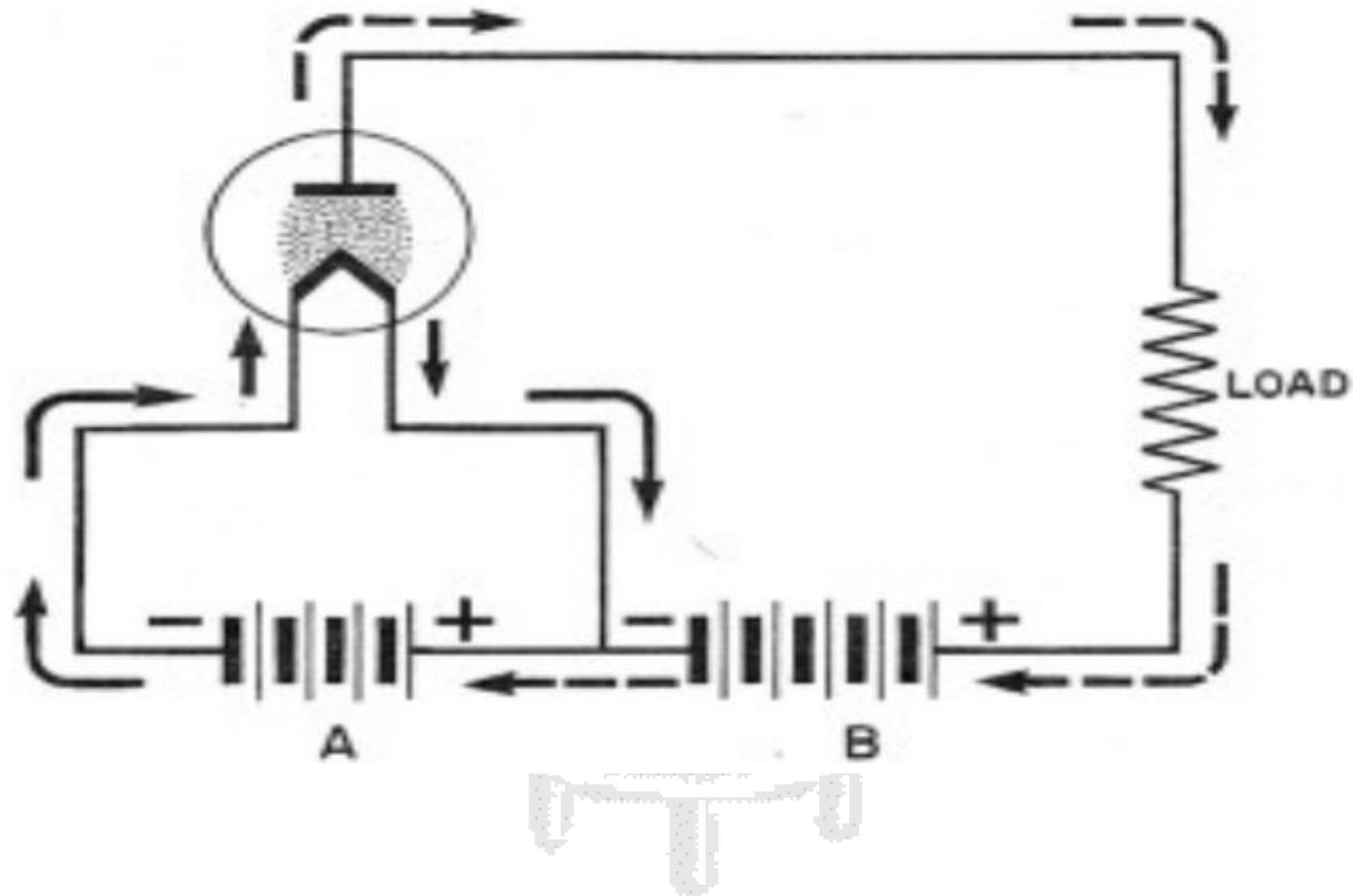
How long is dash compared to a dot?



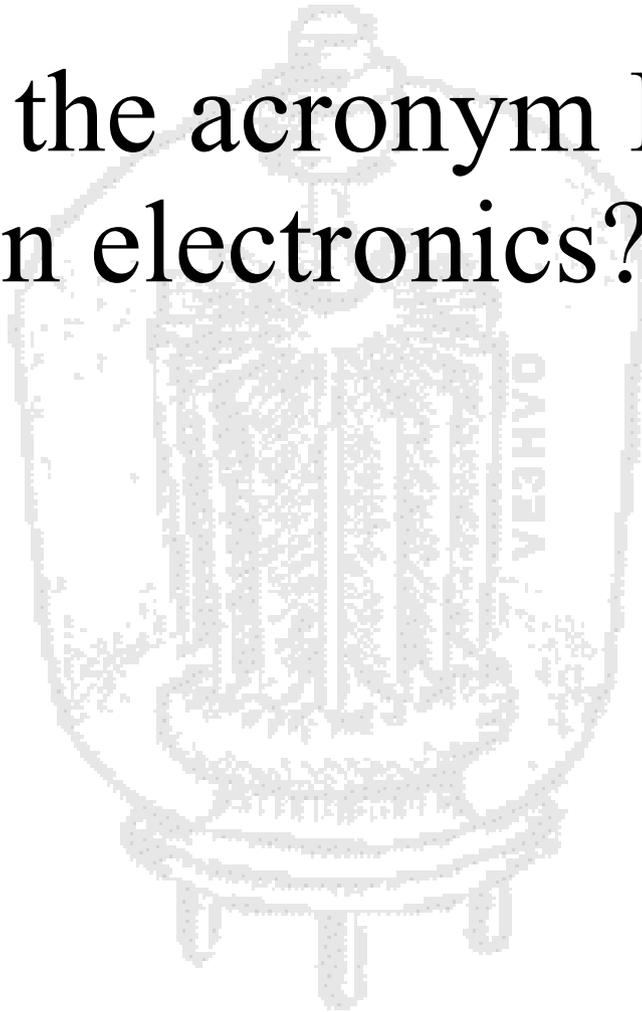
**In a single speaker radio, does it matter which lead goes to which terminal on the speaker?**



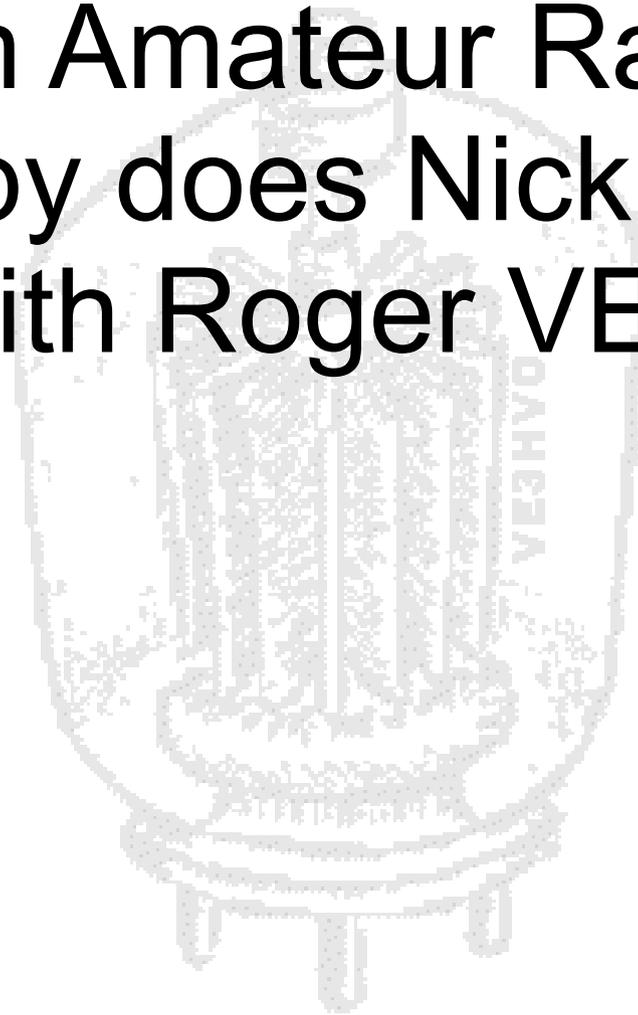
What is shown in this diagram?



What does the acronym PCB mean  
in electronics?



**Apart from Amateur Radio, what other hobby does Nick VA3NNW share with Roger VE3RKS?**



What does the abbreviation UTC stand for?



# Name this transceiver



# What is meant by ELF?

(no, nothing to do with Santa Claus)



Where did Gonset radios get that name?

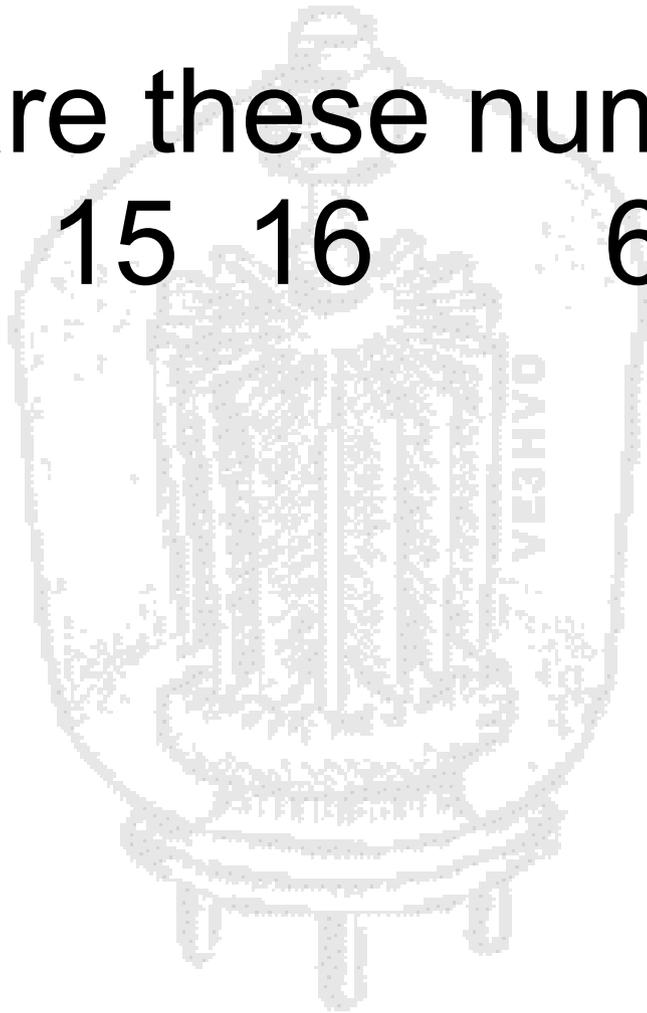


In the UK, a “Class B License” compares how to a “Class A”?

- 1: Is the same
- 2: Has access to less bands
- 3: Is limited on power
- 4: Is not allowed to operate CW?

What are these numbers?

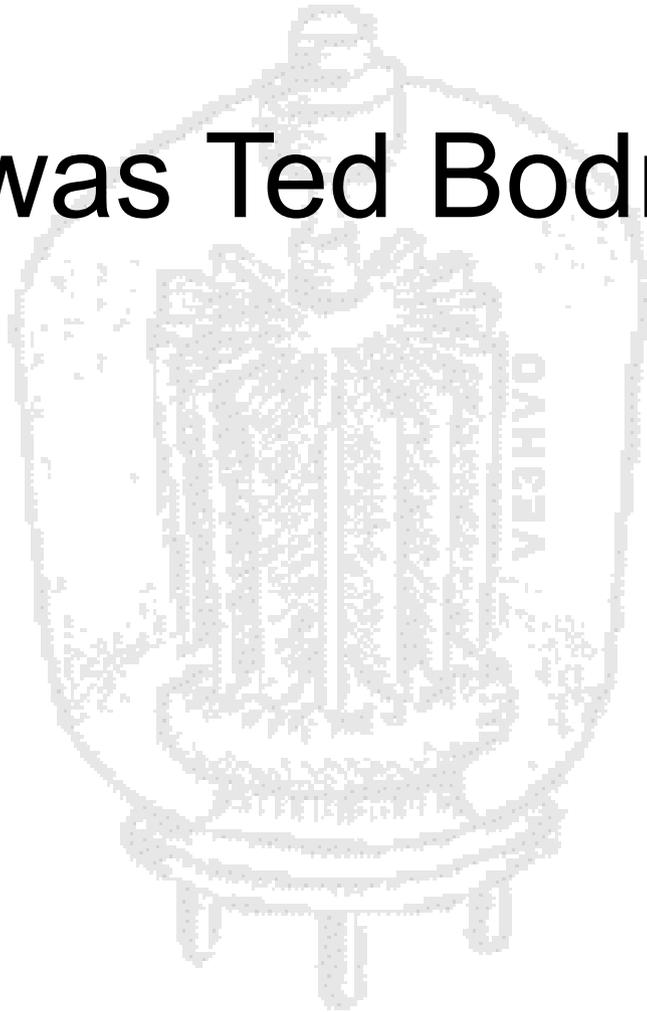
13 14 15 16 600/16



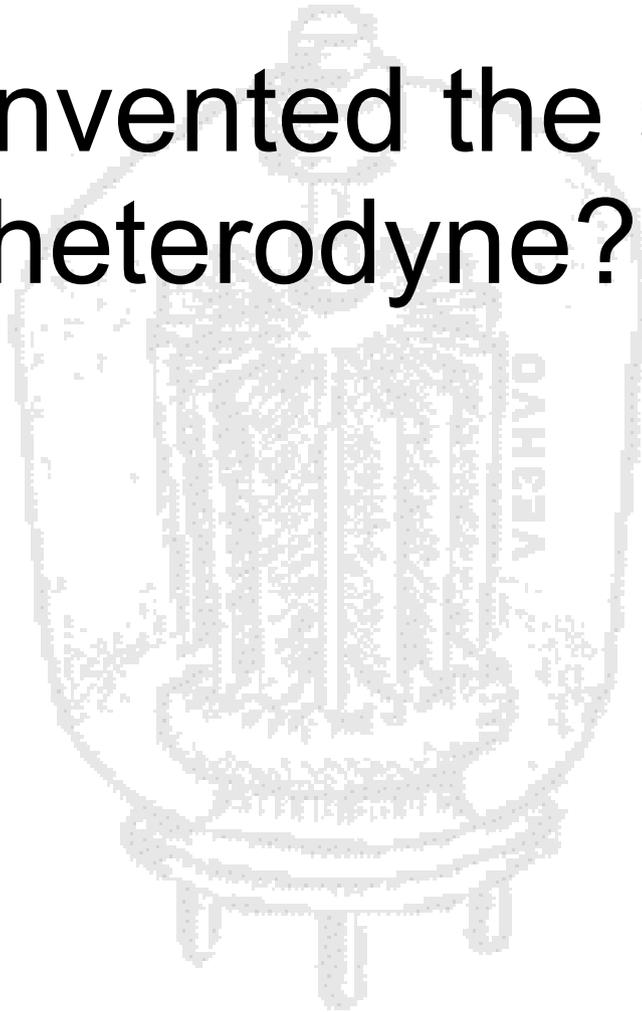
Who was The old man?



# Who was Ted Bodman?



Who invented the super heterodyne?



Who invented wide band FM  
broadcasting?



Who did David Sarnoff ban from  
the RCA building for sitting on  
top of the tower on the building  
roof?



Who was Art Collins ham friend  
who was instrumental in getting  
SSB widely accepted?



What was Art Collins call sign?



If this were Morse, what would it be?



**An isotropic antenna is a:**

- A: hypothetical point source**
- B: infinitely long piece of wire**
- C: dummy load**
- D: half-wave reference dipole**

Where a friend is not the holder of any type of radio operator certificate, you, as a holder of an Amateur Radio Operator Certificate with Basic Qualification, may, on behalf of your friend:

A: install an amateur station, but not operate or permit the operation of the apparatus

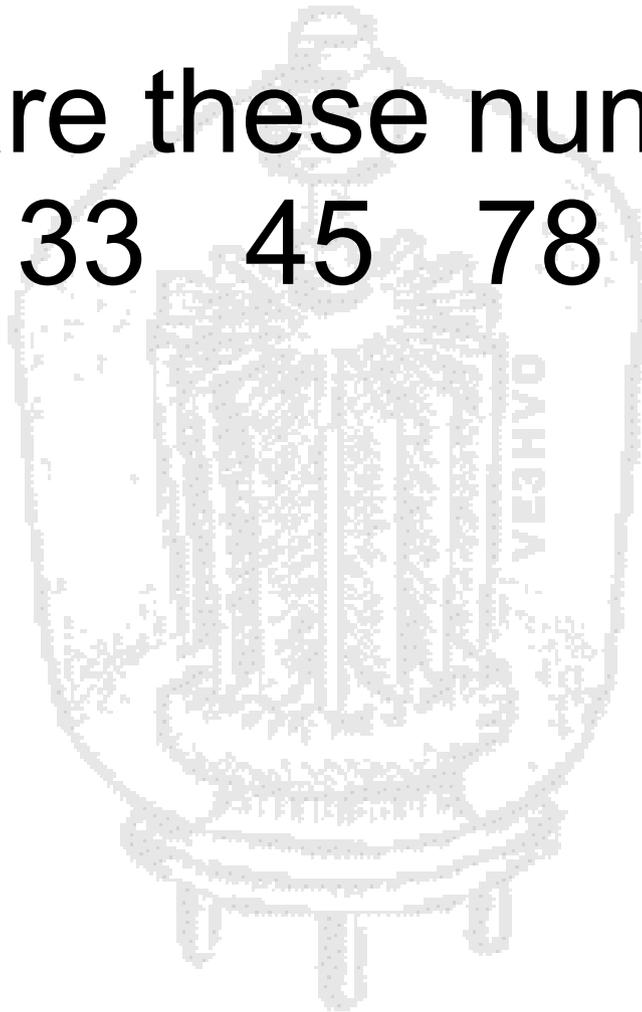
B: install and operate the radio apparatus, using your own call sign

C: modify and repair the radio apparatus but not install it

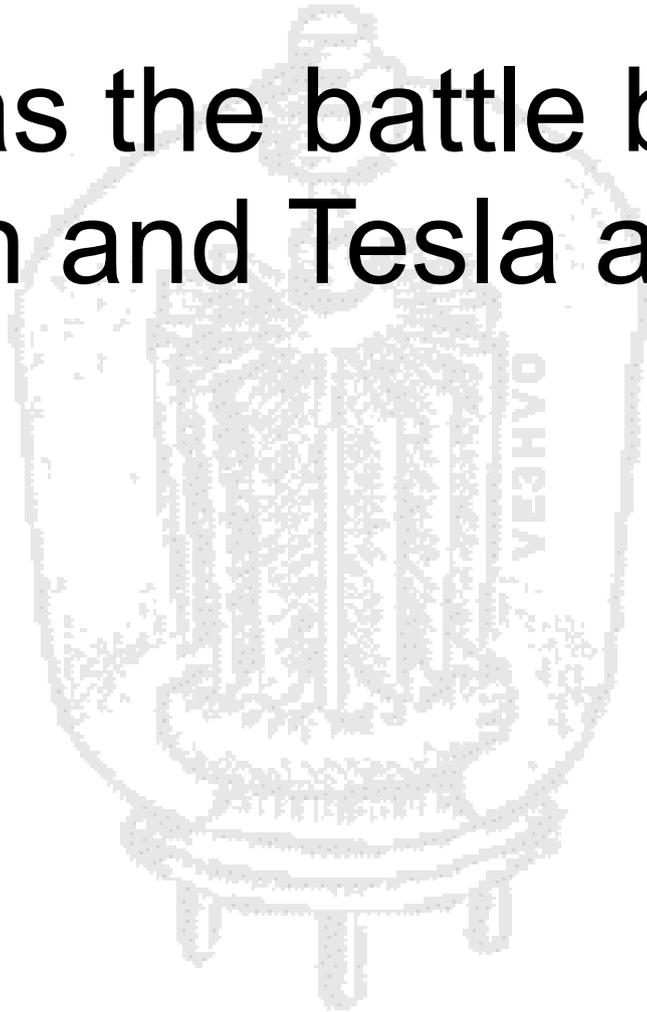
D: not install, place in operation, modify, repair, maintain, or permit the operation of the radio apparatus

What are these numbers?

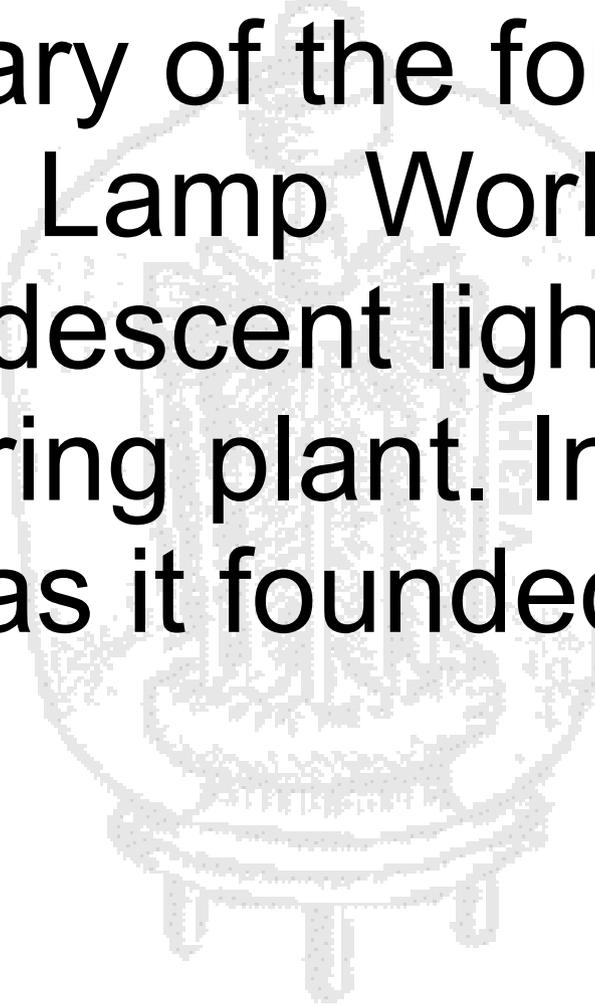
33 45 78



**What was the battle between  
Edison and Tesla about?**



Friday October 1 was the anniversary of the founding of the Edison Lamp Works, the first incandescent light bulb manufacturing plant. In what year was it founded?

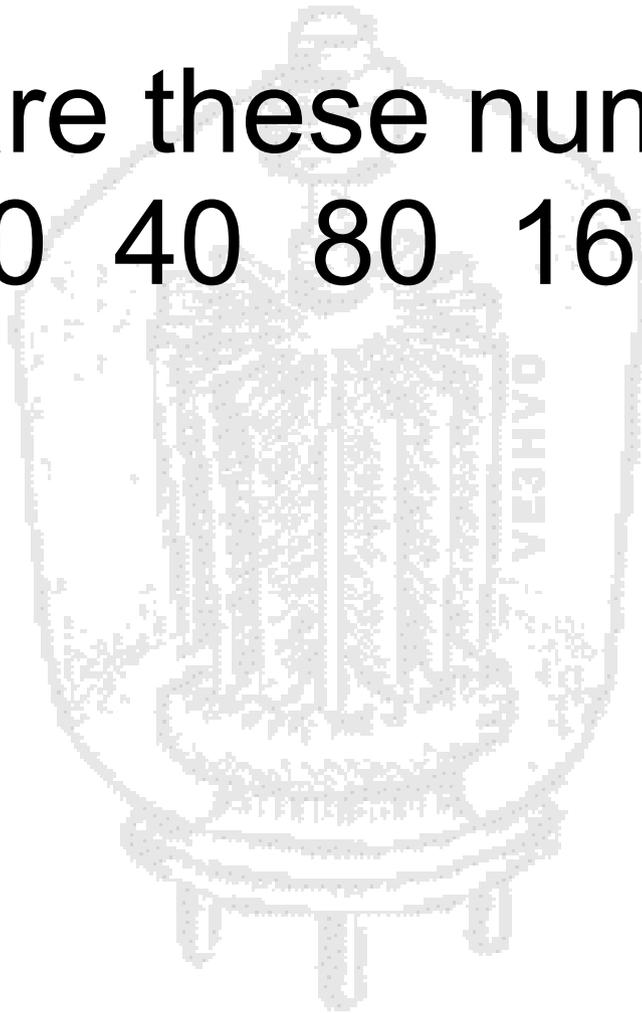
A faint, light-colored illustration of an Edison-style incandescent light bulb is centered in the background. The bulb has a rounded glass envelope and a visible filament structure. It is mounted on a base with several small feet or supports. The entire image is set against a white rectangular area on a blue background with a subtle pattern.

What does VoIP stand for?

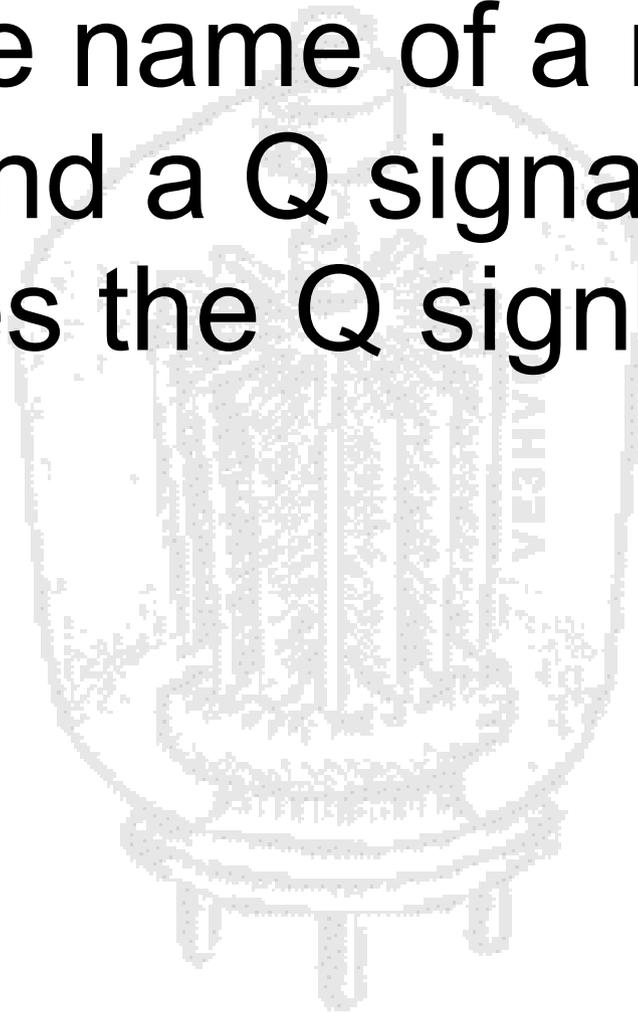


What are these numbers?

20 40 80 160



**QST is the name of a magazine  
and a Q signal.  
What does the Q signal mean?**

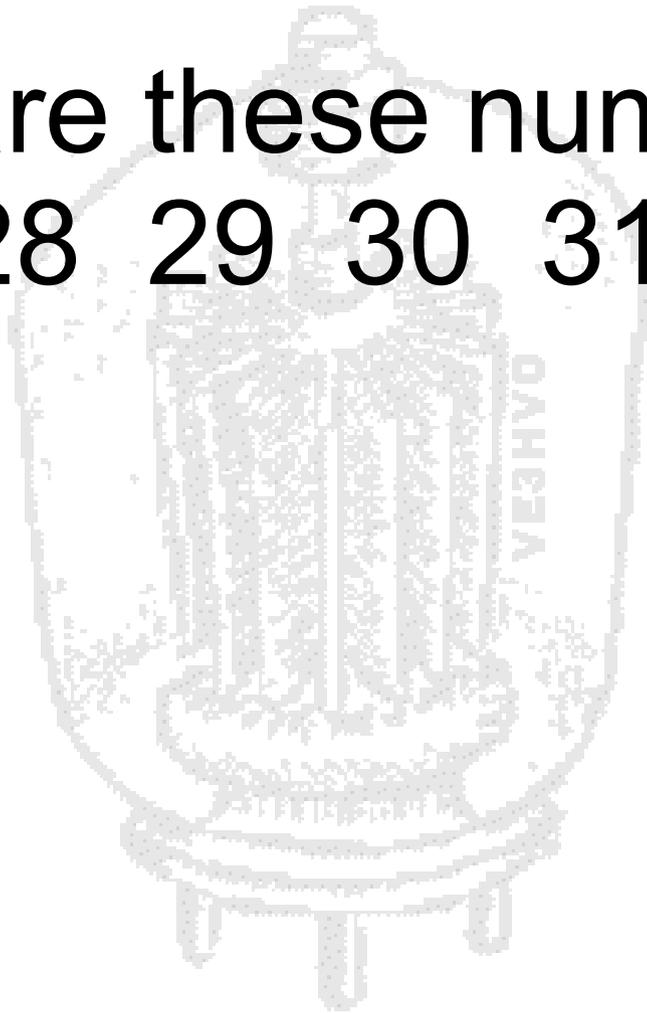


What is CONELRAD?



What are these numbers?

28 29 30 31

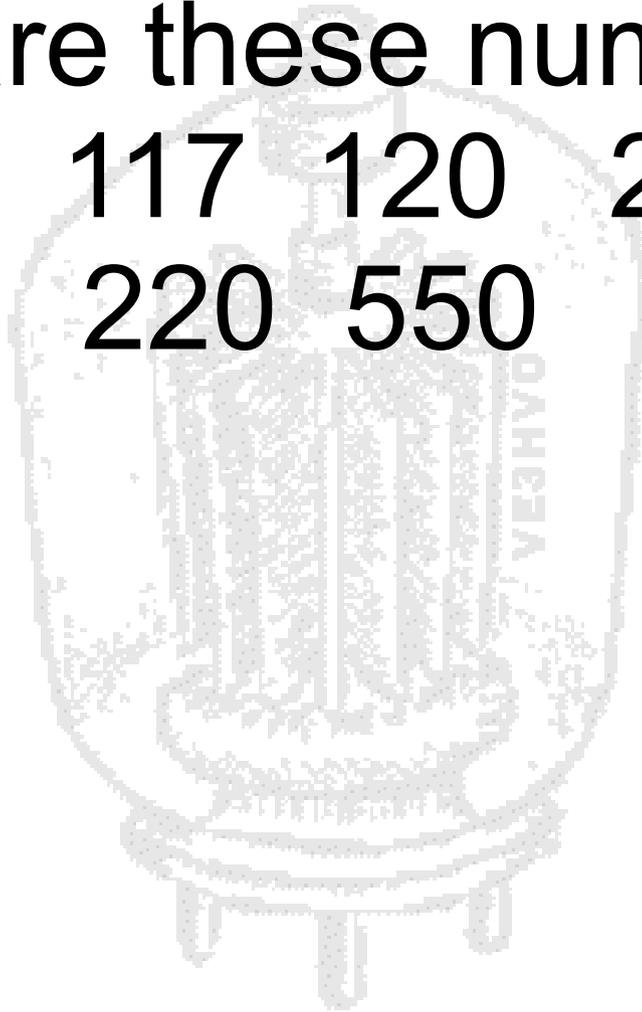


What is the call sign of the  
Canadian time standard station?



What are these numbers?

110 115 117 120 200 210  
220 550



The cubical "quad" or "quad" antenna consists of two or more square loops of wire. The driven element has an approximate overall length of:

- A: three-quarters of a wavelength
- B: one wavelength
- C: two wavelengths
- D: one-half wavelength

In Canada, the 15 metre amateur band corresponds in frequency to:

A: 18.068 to 18.168 Mhz

B: 14.000 to 14.350 Mhz

C: 28.000 to 29.700 Mhz

D: 21.000 to 21.450 MHz

What distress signal came before  
SOS?



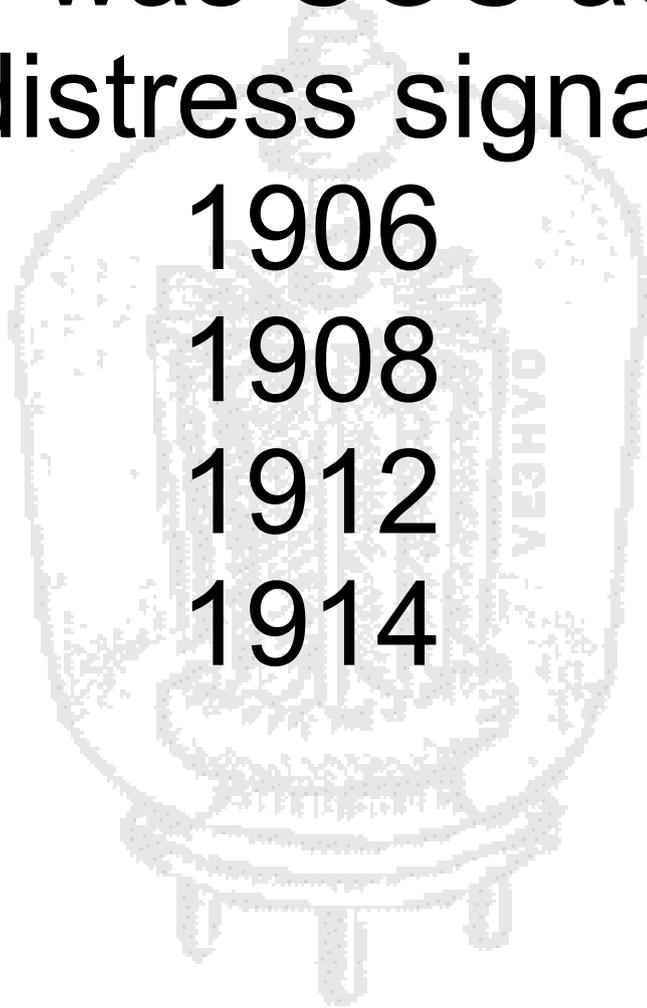
What year was SOS adopted as  
a distress signal?

1906

1908

1912

1914



In an FM receiver, the \_\_\_\_\_ is connected to the input of the radio frequency amplifier?

A: mixer

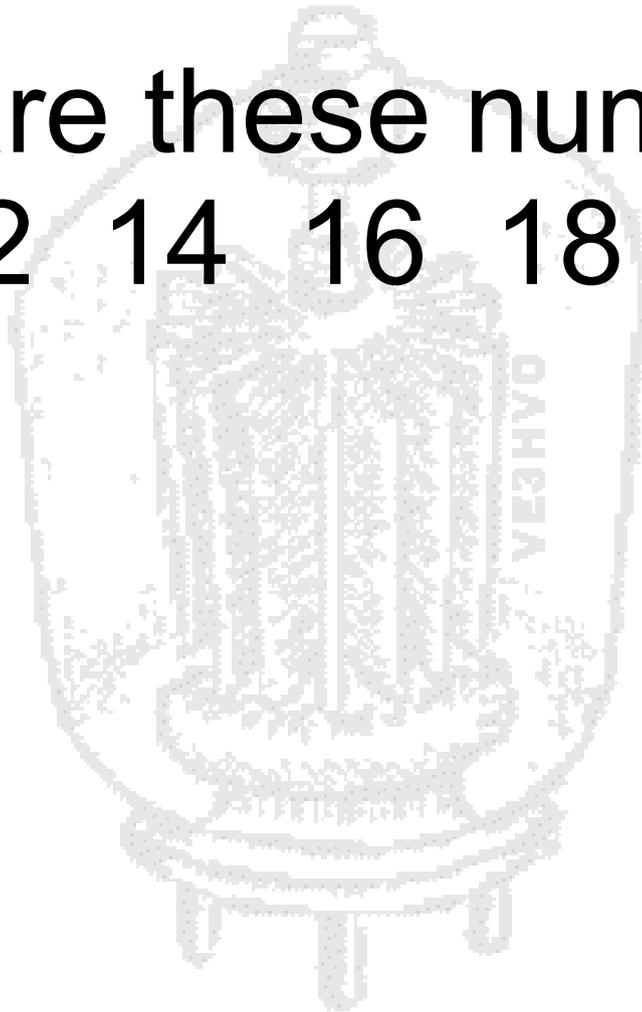
B: frequency discriminator

C: antenna

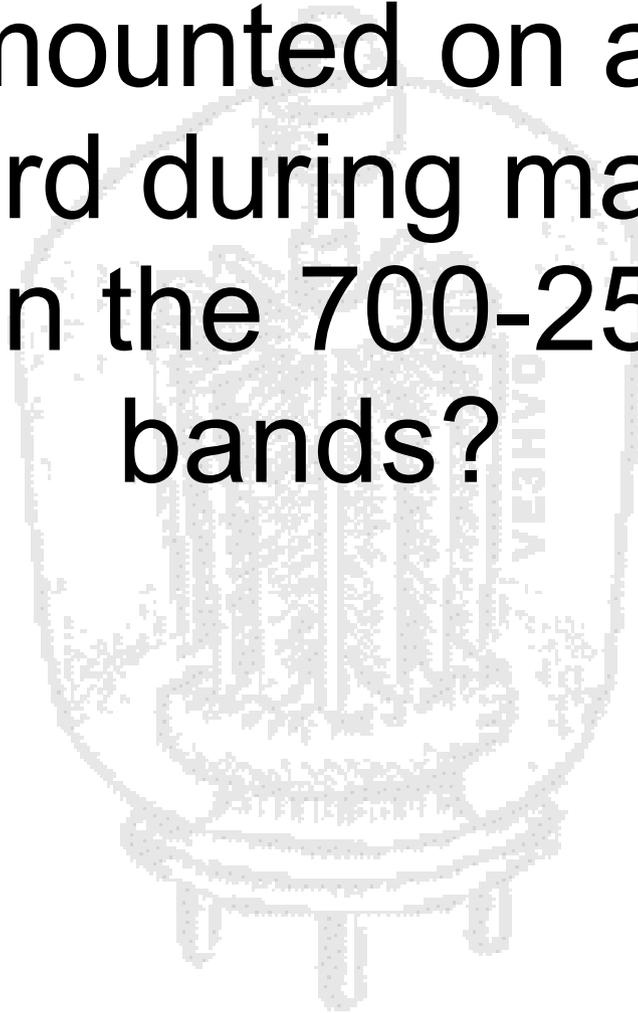
D: limiter

What are these numbers?

8 10 12 14 16 18 20 etc



Name two types of antenna that can be mounted on a printed circuit board during manufacture for use in the 700-2500MHz bands?



On October 1, 1908, Ford announced the Model T. How much did it sell for back then?



What part of the early Model T Ford was used by hams as their CW Transmitter?

A: Steel running boards

B: Spare tire holder

C: Matching rear bumpers

D: Wood-encased ignition coil?

What is the name of the tablet device announced last week by RIM?



Who is running for mayor in  
Kitchener?



How many computers are  
trashed each day in the US?



How many cell phones are trashed each day in the US?



The two basic types of field effect transistors (FET) are:

A: NPN and PNP

B: germanium and silicon

C: inductive and capacitive

D: N and P channel

**Who was Hiram Percy Maxim?**

**A: Famous Inventor**

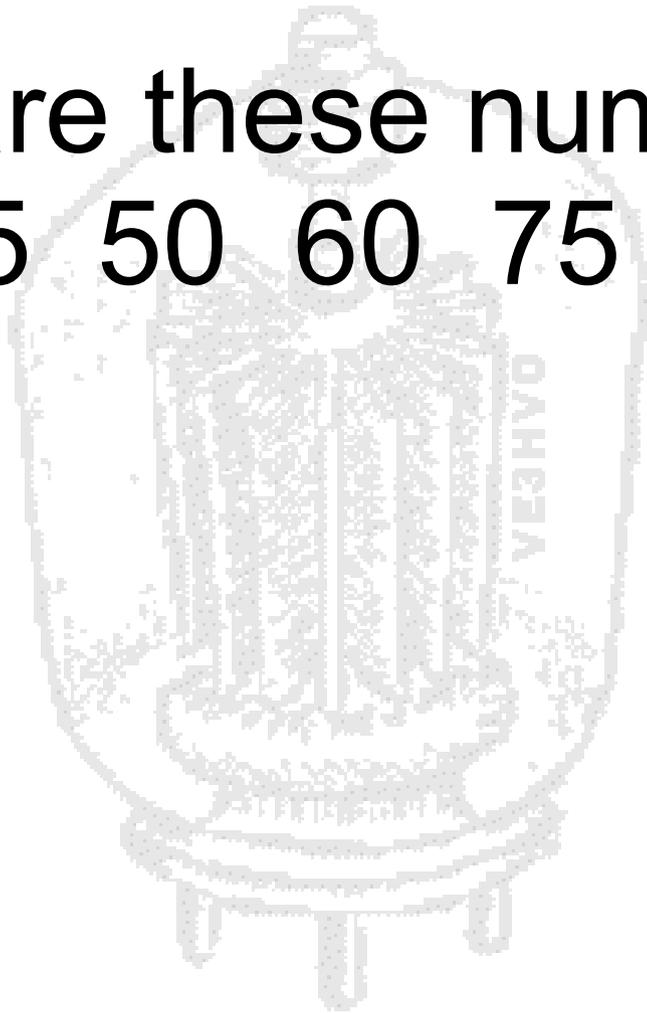
**B: He saved ham radio from  
being banned**

**C: Founder of the ARRL**

**D: All of the above**

What are these numbers?

7.5 15 25 50 60 75 100 200



What can be found at  
[101science.com](http://101science.com)?

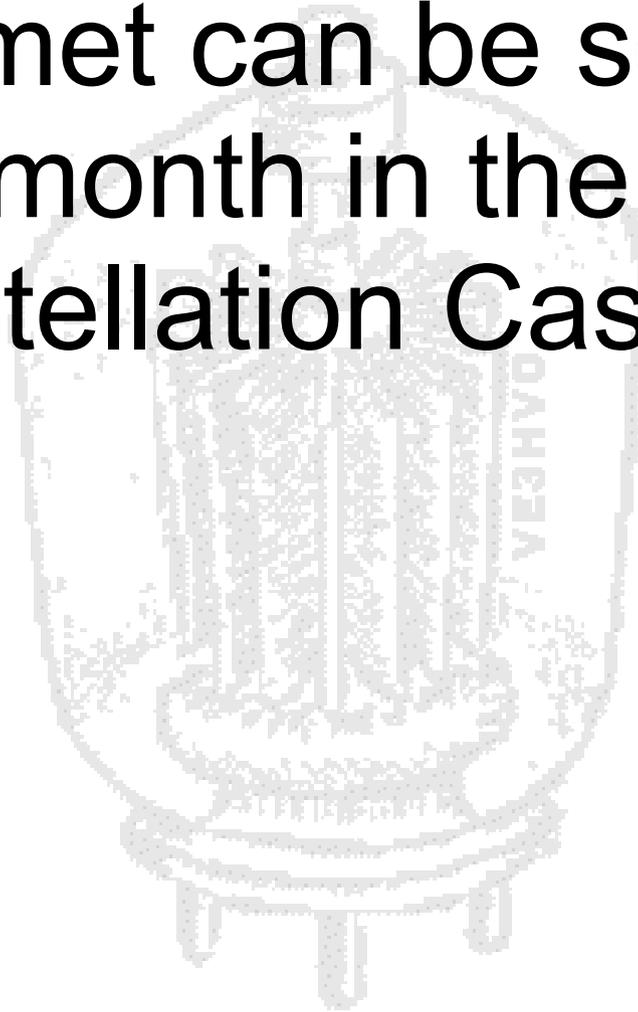


What are these numbers?

705 416 519 905



What comet can be seen overhead this month in the vicinity of the constellation Cassiopeia?



The “HQ-120-X” Receiver was made by what company?

A: Hammarlund

B: Howard

C: Hallicrafters

D: Hewlett Packard

What are these numbers?

1 2 5 10 20



Pilots used to carry a circular slide rule. What was the name for it?



Was Ben Franklin's kite really struck by lightning?



Re-entering space craft heat up due to air friction. True or false?



What are these numbers?

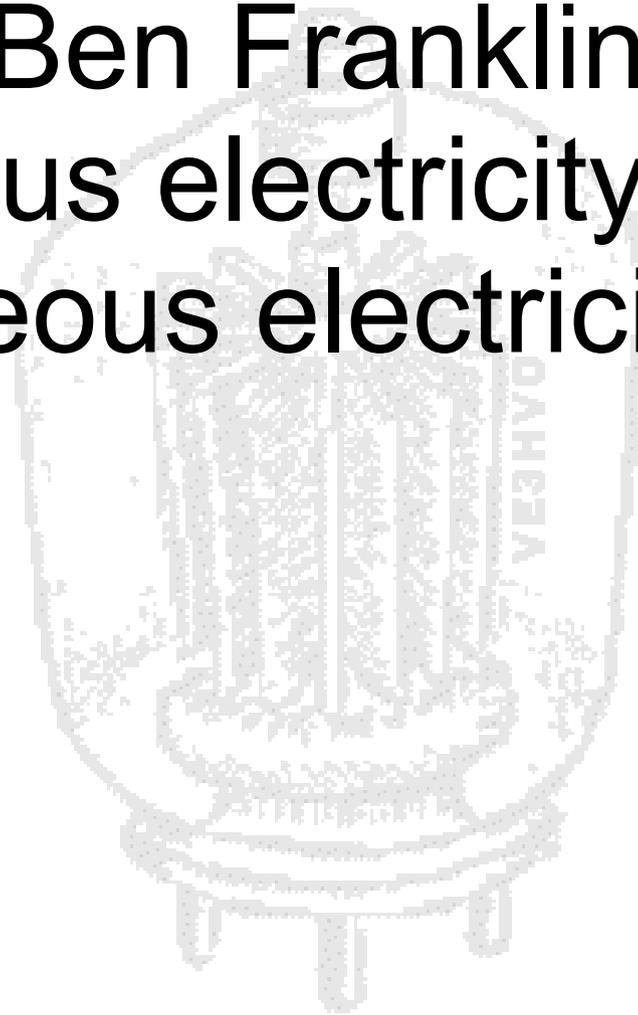
3.2 4 8 16 45



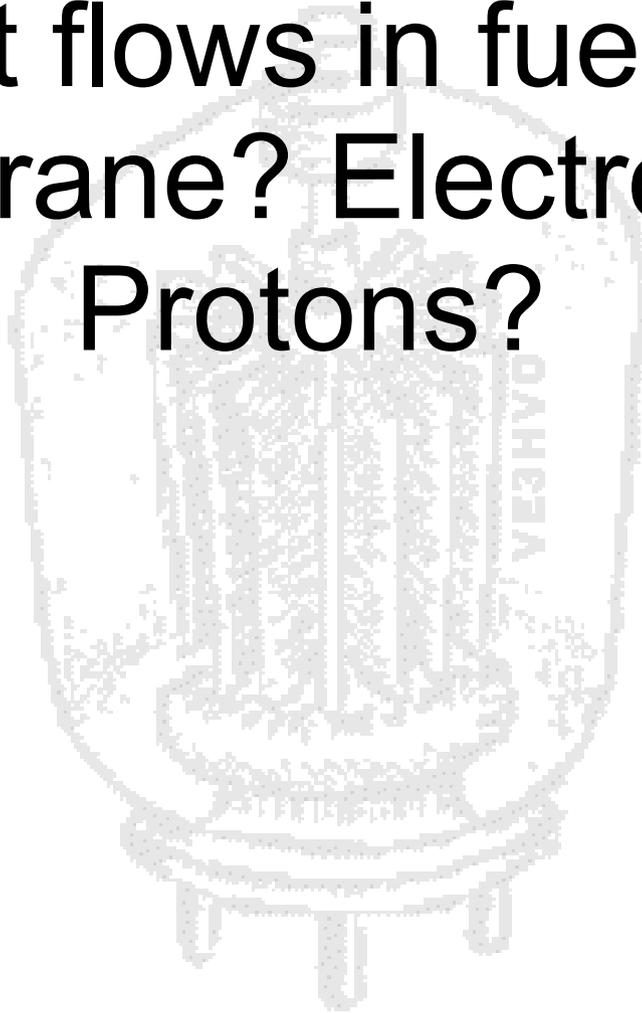
Electricity is weightless. True or false?



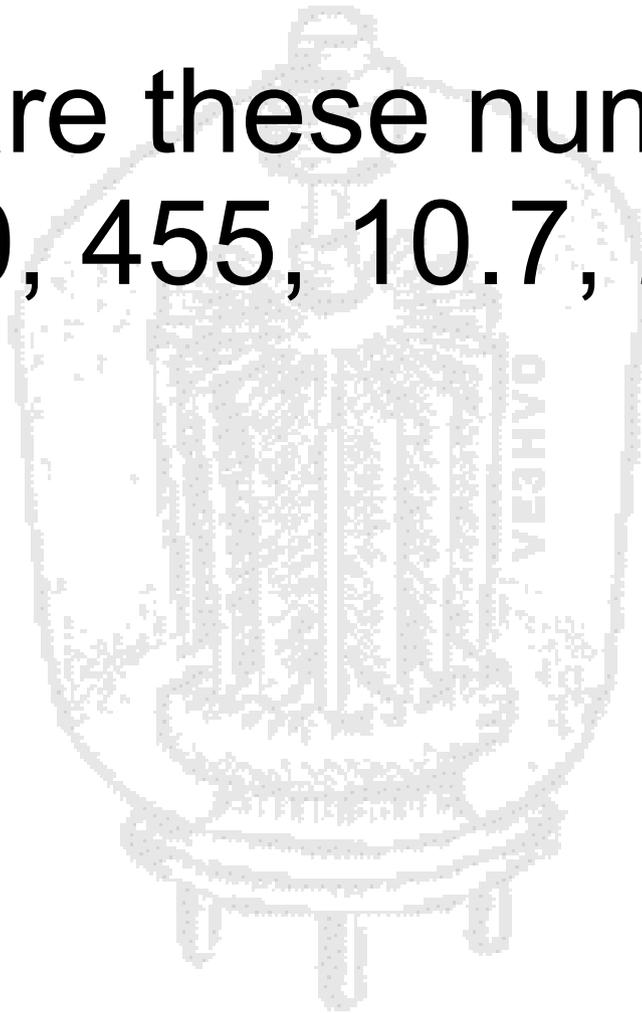
What did Ben Franklin mean by  
“resinous electricity” and  
“vitreous electricity”?



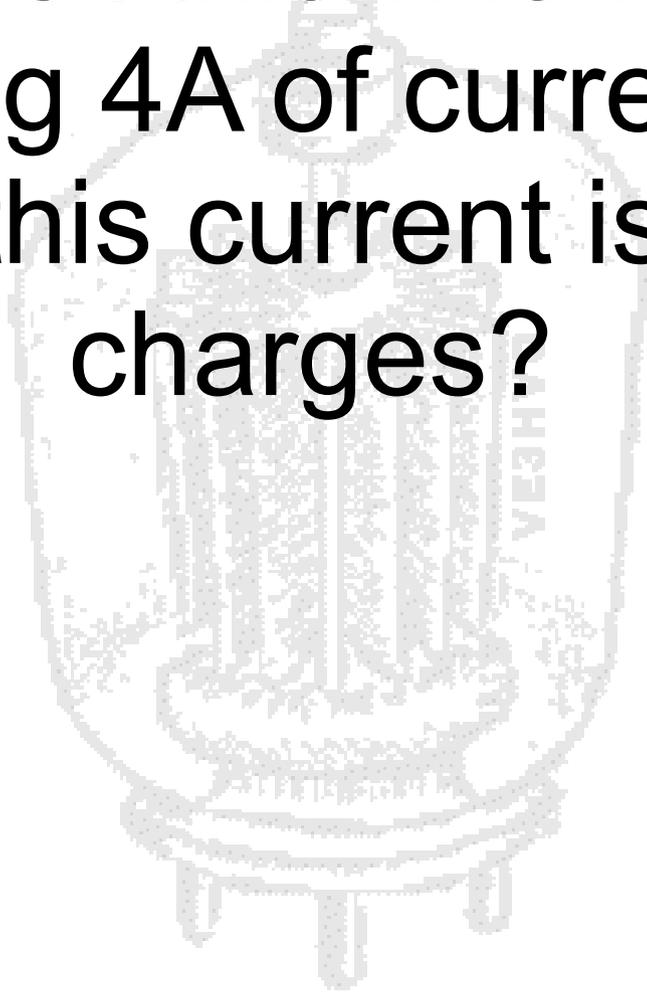
What flows in fuel cell  
membrane? Electrons or  
Protons?



What are these numbers?  
262, 450, 455, 10.7, 21.4, 45



If your HT's lithium ion battery is supplying 4A of current, how much of this current is positive charges?



What is the name of the band above UHF in the 1 to 2 GHz range?



What is the value of a 4 colour band resistor: brown, white, blue, black, red?

0 Black

1 Brown

2 Red

3 Orange

4 Yellow

5 Green

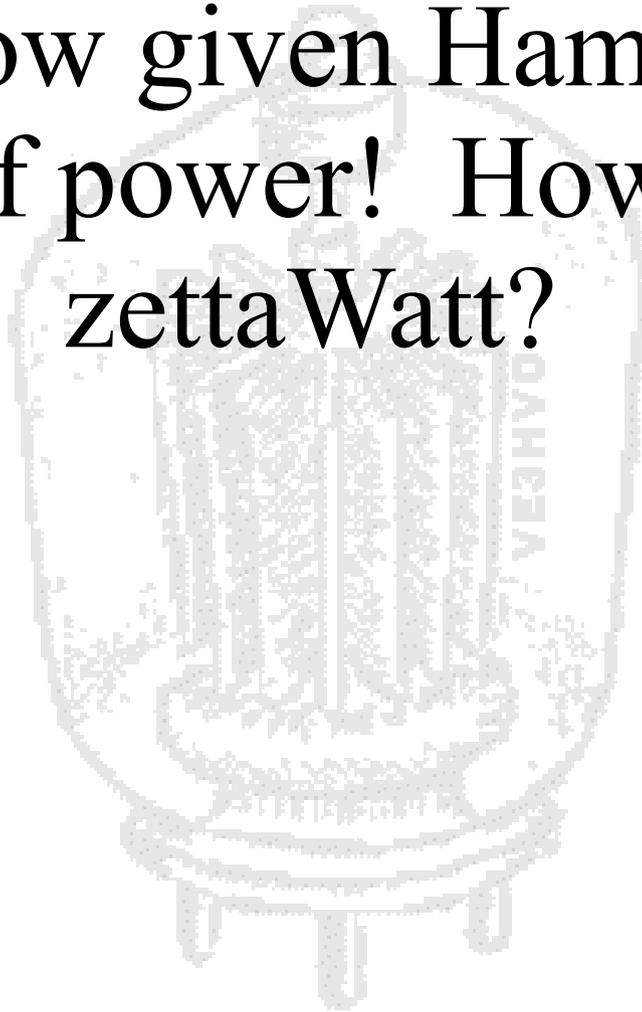
6 Blue

7 Violet

8 Gray

9 White

IC has now given Hams up to a zettaWatt of power! How much is a zettaWatt?



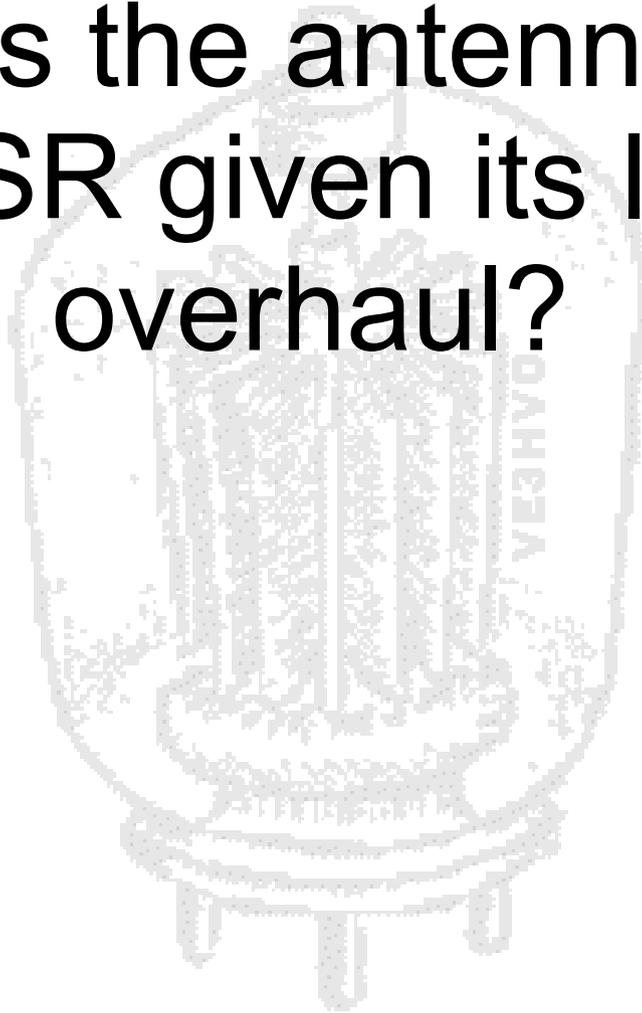
How many mA of current are required to reach the “cannot let go” threshold?



# What was WWPUG?

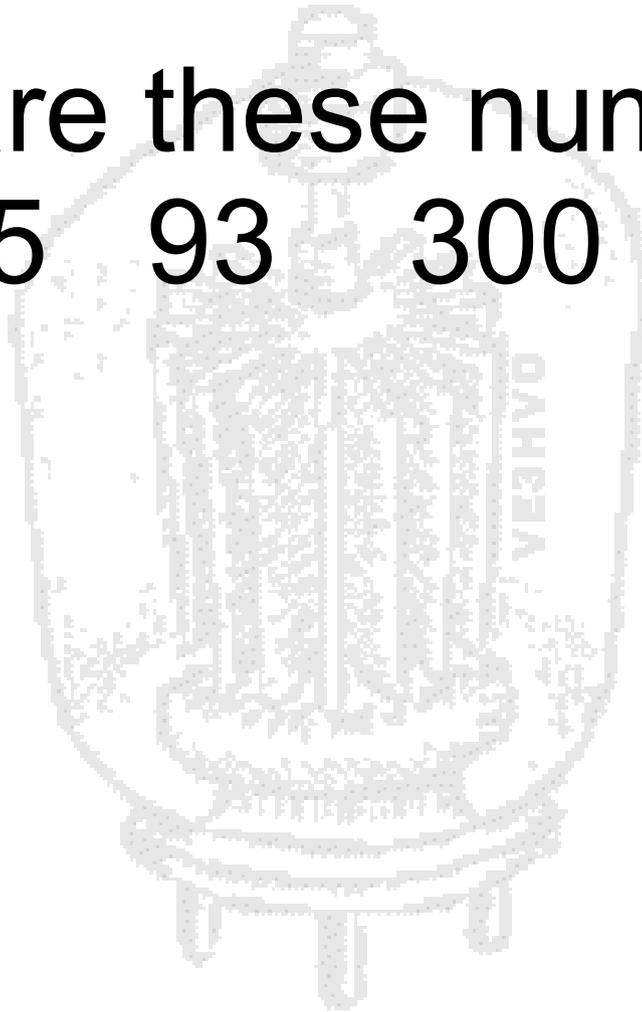


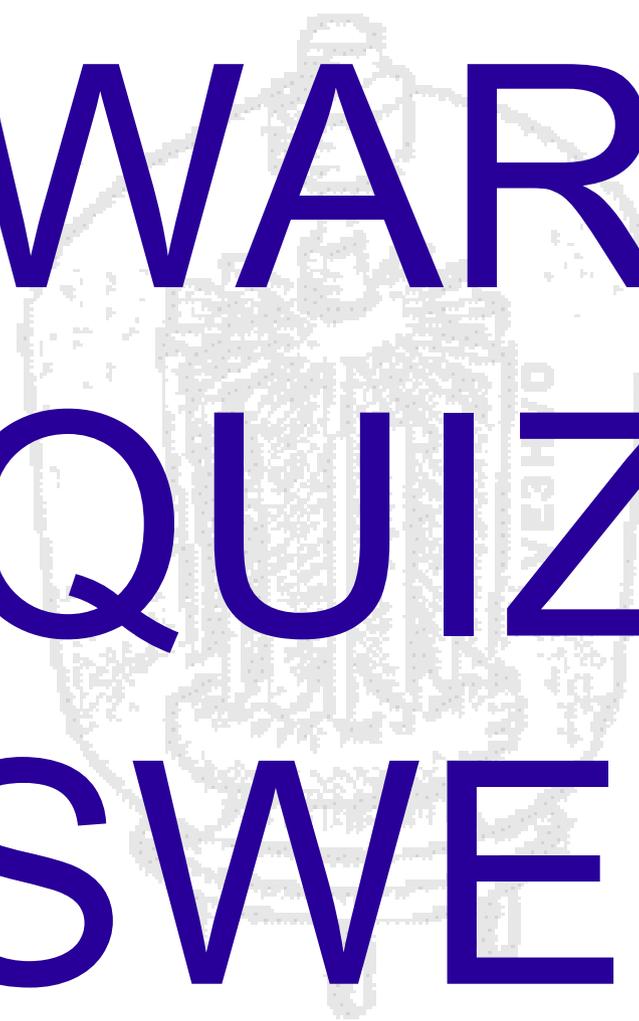
When was the antenna system  
for VE3KSR given its last major  
overhaul?



What are these numbers?

50 52 75 93 300 450 600





**KWARC  
QUIZ  
ANSWERS!**

What is the Standard  
International Phonetic for the  
letter L?

Love

London

Luxembourg

Lima

LIMA

How long is dash compared to a dot?

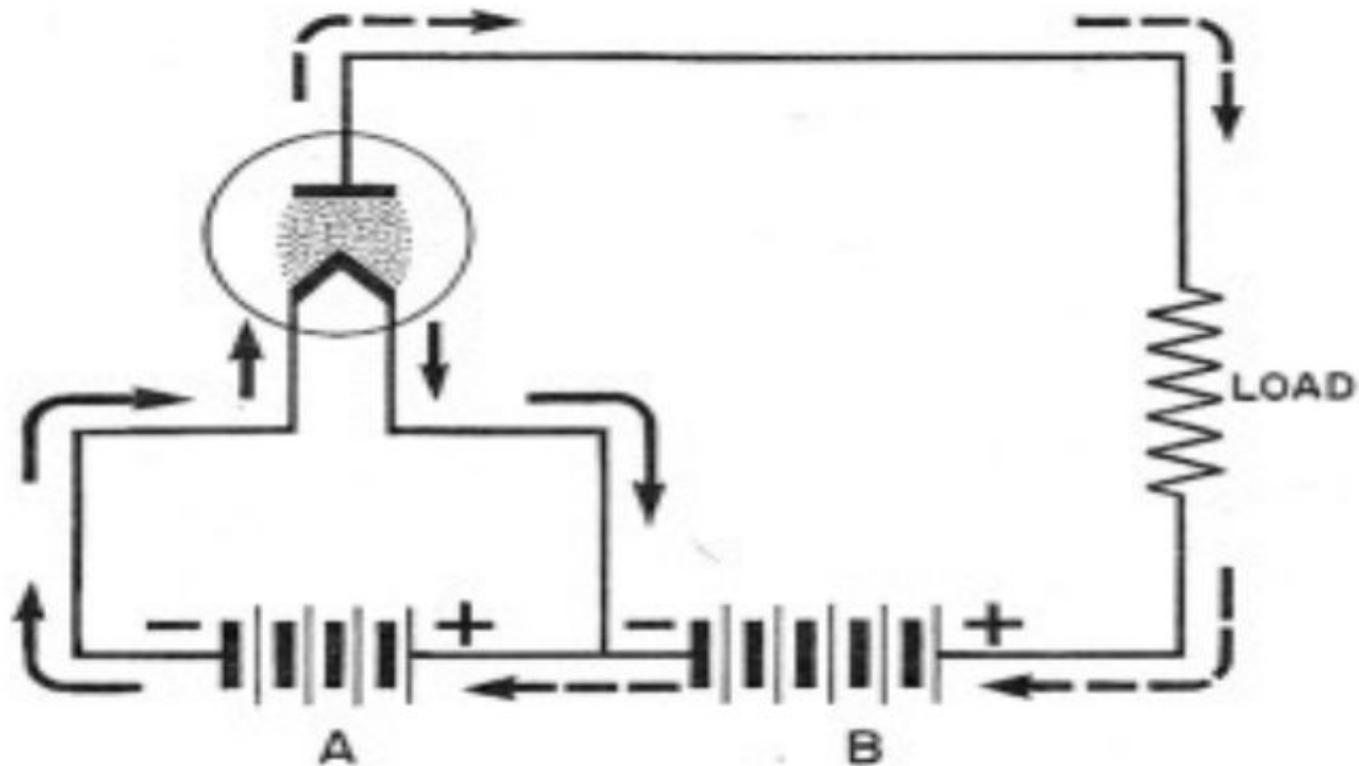
3 times

In a single speaker radio, does it matter which lead goes to which terminal on the speaker?

No, as the signal going into the speaker is AC and polarity doesn't matter.

Now, if you have two speakers, yes it does matter as the speaker cones **HAVE** to be in phase

What is shown in this diagram?



Diode Tube Circuit

What does the acronym PCB mean  
in electronics?

Printed circuit board.  
(Polychlorinated biphenyls as  
well).

Apart from Amateur Radio, what other hobby does Nick VA3NNW share with Roger VE3RKS?

Geocaching!

(Sometimes described as “using a billion-dollar military satellite system to find tupperware in the woods”)

What does the abbreviation UTC stand for?

Universal temps coordonee  
Universal coordinated time

# Name this transceiver



Elecraft K2

# What is meant by ELF?

(no, nothing to do with Santa Claus)

Extremely Low Frequency

Where did Gonset radios get that name?

Faust Gonset (W6VR) joined his fathers company to manufacture radios.

In the UK, a “Class B License” compares how to a “Class A”?

- 1: Is the same
- 2: Has access to less bands
- 3: Is limited on power
- 4: Is not allowed to operate CW?

1: They are (now) the same.

What are these numbers?

13 14 15 16 600/16

Tyres

Who was The old man?

Hiram Percy Maxim (W1AW)

# Who was Ted Bodman?

VE3CD. Member of KWARC, (recently deceased, aged 94) Original owner of Waterloo electronics. Trained at the famous WW2 spy training Camp X. Posted to Brazil to intercept enemy coded messages.

Who invented the super  
heterodyne?

Edwin Armstrong.

Who invented wide band FM  
broadcasting?

Edwin Armstrong

Who did David Sarnoff ban from  
the RCA building for sitting on  
top of the tower on the building  
roof?

Edwin Armstrong

Who was Art Collins ham friend  
who was instrumental in getting  
SSB widely accepted?

Gen. Curtis LeMay, USAF  
(K0GRL)

What was Art Collins call sign?



W0CXX

If this were Morse, what would it be?



@

**An isotropic antenna is a:**

- A: hypothetical point source**
- B: infinitely long piece of wire**
- C: dummy load**
- D: half-wave reference dipole**

**A: hypothetical point source**

Where a friend is not the holder of any type of radio operator certificate, you, as a holder of an Amateur Radio Operator Certificate with Basic Qualification, may, on behalf of your friend:

A: install an amateur station, but not operate or permit the operation of the apparatus

B: install and operate the radio apparatus, using your own call sign

C: modify and repair the radio apparatus but not install it

D: not install, place in operation, modify, repair, maintain, or permit the operation of the radio apparatus

**D**

What are these numbers?

33 45 78

Record Speed

# What was the battle between Edison and Tesla about?

DC (Edison) vs. AC (Tesla)

Friday October 1 was the anniversary of the founding of the Edison Lamp Works, the first incandescent light bulb manufacturing plant. In what year was it founded?

1880

Did Donny Fisher work there?



;-)

What does VoIP stand for?

Voice Over Internet Protocol

What are these numbers?

20 40 80 160

Imp. ounce measure half pint, pint,  
quart gallon

**QST is the name of a magazine  
and a Q signal.  
What does the Q signal mean?**

**Calling all amateurs**

# What is CONELRAD?

An emergency system to shut down all US transmitters so an enemy couldn't use the emissions for direction finding.

What are these numbers?

28 29 30 31

Days in a month

What is the call sign of the  
Canadian time standard station?



CHU

What are these numbers?

110 115 117 120 200 210  
220 550

A.C. Voltages

The cubical "quad" or "quad" antenna consists of two or more square loops of wire. The driven element has an approximate overall length of:

A: three-quarters of a wavelength

B: one wavelength

C: two wavelengths

D: one-half wavelength

B: one wavelength

In Canada, the 15 metre amateur band corresponds in frequency to:

A: 18.068 to 18.168 Mhz

B: 14.000 to 14.350 Mhz

C: 28.000 to 29.700 Mhz

D: 21.000 to 21.450 MHz

D: 21.000 to 21.450 MHz

What distress signal came before  
SOS?

CQD

What year was SOS adopted as  
a distress signal?

1906

1908

1912

1914

1906

In an FM receiver, the \_\_\_\_\_ is connected to the input of the radio frequency amplifier?

A: mixer

B: frequency discriminator

C: antenna

D: limiter

C: Antenna

What are these numbers?  
8 10 12 14 16 18 20 etc

Wire Gauge

Name two types of antenna that can be mounted on a printed circuit board during manufacture for use in the 700-2500MHz bands?

Trace and Ceramic

On October 1, 1908, Ford announced the Model T. How much did it sell for back then?

\$850

What part of the early Model T Ford was used by hams as their CW Transmitter?

A: Steel running boards

B: Spare tire holder

C: Matching rear bumpers

D: Wood-encased ignition coil?

D: The wood-encased ignition coil

What is the name of the tablet device announced last week by RIM?



BlackBerry PlayBook



Who is running for mayor in  
Kitchener?

Carl Zehr, Frank Kulsar, Don Pinnell

How many computers are  
trashed each day in the US?

130k

How many cell phones are  
trashed each day in the US?

300k

The two basic types of field effect transistors (FET) are:

A: NPN and PNP

B: germanium and silicon

C: inductive and capacitive

D: N and P channel

D: N and P channel

**Who was Hiram Percy Maxim?**

**A: Famous Inventor**

**B: He saved ham radio from  
being banned**

**C: Founder of the ARRL**

**D: All of the above**

**D: All of the above**

What are these numbers?

7.5 15 25 50 60 75 100 200

Lightbulb Wattages

# What can be found at 101science.com?

Full amateur radio resource and links to  
radio electronics, astronomy, science,  
math, and much more.

What are these numbers?

705 416 519 905

Area codes!

What comet can be seen overhead this month in the vicinity of the constellation Cassiopea?

Hartley (Binocular viewing)

The “HQ-120-X” Receiver was made by what company?

A: Hammarlund

B: Howard

C: Hallicrafters

D: Hewlett Packard

A: Hammarlund

What are these numbers?

1 2 5 10 20

Resistor, Capacitor Tolerance in %

Pilots used to carry a circular slide rule. What was the name for it?

A Jeppeson

# Was Ben Franklin's kite really struck by lightning?

If it was he would have died sooner. He did show that the kite and string could collect a little bit of charge imbalance out of the sky. The lesson: silk ribbon and metal keys are no match for big charge differences.

Re-entering space craft heat up due to air friction. True or false?

False, They heat up by squeezing the air - same as a bike pump does, and it gets hot too.

What are these numbers?

3.2 4 8 16 45

Speaker impedances

**Electricity is weightless. True or false?**

**If electricity is electrons, then no. Electrons have mass. 1 kg of copper has about 10 mg of electrons.**

What did Ben Franklin mean by  
“resinous electricity” and  
“vitreous electricity”?

Negative and positive charges

What flows in fuel cell  
membrane? Electrons or  
Protons?

Protons (go look up proton conductor)

What are these numbers?  
262, 450, 455, 10.7, 21.4, 45

IF frequencies

If your HT's lithium ion battery is supplying 4A of current, how much of this current is positive charges?

Half –two way flow of ions

What is the name of the band above UHF in the 1 to 2 GHz range?

L band

What is the value of a 4 colour band resistor: brown, white, blue, black, red?

196 ohm  $\pm$  2%

IC has now given Hams up to a zettaWatt of power! How much is a zettaWatt?

1 sextillion watts ( $10^{21}$ ) (Talk about lighting up the sky!)

How many mA of current are required to reach the “cannot let go” threshold?

13mA

# What was WWPUG?

Waterloo Wellington Packet users group.  
Formed in 1995 by an interested group  
composed primarily of KWARC  
members-to promote packet in the area.  
VE3KWQ repeater was located on the  
Baden Hill. (Check this with Tedd  
VE3TJD) We dedicated the residual of  
our funds to purchase the original  
weather station located on the Baden  
Hill

When was the antenna system  
for VE3KSR given its last major  
overhaul?

[Ask Ben]

What are these numbers?

50 52 75 93 300 450 600

Transmission line impedance



**HOW DID  
YOU DO?**



**THANKS  
ALL!**