

## PROPOSED AMENDMENTS TO THE CONSTITUTION AND BYLAWS TO BE VOTED ON AT MARCH MEETING

A committee of STARS members has reviewed the club Constitution and Bylaws and has proposed four amendments. These amendments will be voted on (on a line item basis) at the March meeting. The proposed amendments are:

### AMENDMENT #1:

Article 1: Membership

Section 2: Classes of Membership will be as follows:

E. STUDENT MEMBERS: are those members in school, but at grade 12 or less.

Proposed change:

*E. STUDENT MEMBERS: are those members in school, but at grade 12 or less, or full-time college students.*

### AMENDMENT #2:

Article 1: Membership

Section 2: Classes of Membership will be as follows:

Proposed addition:

*F. ASSOCIATE MEMBERS: are those members who pass a license exam at a STARS VE Session. Associate memberships are valid for the remainder of the year, are non-voting, and only receive the Telstar and club correspondence by email.*

### AMENDMENT #3:

ARTICLE 1: MEMBERSHIP

Proposed addition:

*Section 4: The Board of Directors shall have the authority to create or amend classes of membership.*

## MARCH MEETING

This month's club meeting will begin at 7:00 PM on Thursday March 6th at the **HAMBURG YOUTH CENTER**. All interested in amateur radio are invited to attend. Neither club membership nor an amateur radio license is required.

Our guest presenter, Don Niles K2PMC, will talk to us about antenna modeling.

We look forward to seeing you there!

### AMENDMENT #4:

ARTICLE VI: AMENDMENTS

The Constitution may be amended by a vote of at least seventy five percent (75%) of the members in good standing present at a regular club meeting. The By-Laws shall be amended in the same manner. In either case, according to the Secretary's membership roster, the members in good standing shall be notified by United States mail, as to the date time, place and purpose of the amenditory meeting. Such notice shall be posted at least five business days prior to the said meeting.

Proposed change:

*The Constitution may be amended by a vote of at least seventy five percent (75%) of the members in good standing present at a regular club meeting. The By-Laws shall be amended in the same manner. In either case, according to the Secretary's membership roster, the members in good standing shall be notified as to the date time, place and purpose of the amendatory meeting. Such notice shall be made at least five business days prior to the said meeting.*

## WHERE WE'VE BEEN...

### 5 years ago

#### ...from the March 2003 Telstar

I would like to again offer my condolences to the families of the shuttle astronauts. We lost not only pioneer explorers but members of our amateur radio fraternal family. The STS-107 crew, headed by Commander Rick D. Husband, also included Pilot William C. McCool and Mission Specialists Kalpana Chawla, KD5ESI; David M. Brown, KC5ZTC; Laurel B. Clark, KC5ZSU; Michael P. Anderson, and Payload Specialist Ilan Ramon-Robin. We salute and honor all the astronauts who have fearlessly ridden the shuttle into space. We keep the families of those we lost in our thoughts and prayers.

- President's Column, Bob KA2WYE

### 15 years ago

#### ...from the March 1993 Telstar

Bob WA2IQX, our NIKE Base Chairman, is also our new Vice President to replace Ed N2NUN who leaves us to take up a new QTH in Florida. We wish him well and he promises to stay in touch with us.

- The Gossip Column, Gus WB2EZU

### 20 years ago

#### ...from the March 1988 Telstar

The February General meeting had a stupendous showing. Seating became hard to come by. Special thanks to Kraig, WB2PLW, our guest speaker, for his talk on the Digi-Com 64 Style of Packet Radio.

-The Prez Sez...Bill, N2GAO

### 40 years ago

#### ...from the March 1968 Telstar

We said last month, that it wouldn't be long till the good weather came along. Well we're still waiting... It seems this is one of the worst and longest winters we've had in quite a while. It certainly is not the kind of weather that you would pick to put up an antenna....

- Hap WB2YNR

## INTERNATIONAL DX ASSOCIATION

In 1983 the International DX Association—most often referred to as INDEXA— was incorporated as a non-profit organization to provide assistance to various DXpeditions to rare and semi-rare DXCC entities. This year they are celebrating our 25th anniversary of providing that support. In that time, INDEXA has helped over 175 expeditions to operate from many countries on the DX "most wanted" list. They have supported expeditions to many very rare DXCC entities, sometimes more than once. In the earlier years they actually supplied radio equipment such as rigs, antennas, coax, etc., along with purely financial support. Over time their support has become principally financial contributions since most of today's DXpeditions are receiving valuable support from the various equipment manufacturers.

The latest information on propagation predictions are that the next Solar Cycle began in early January 2008. It looks like we are now beginning that positive climb to what is believed to be a very strong cycle which in turn leads to great propagation on the bands. This positive propagation trend will certainly lead to more DXpeditions wanting to activate countries from the "Most Wanted" DXCC list. Between December 2007 and March 2008, INDEXA is supporting five separate DXpeditions.

What does this mean for INDEXA? Simply, INDEXA will be solicited for financial support to help send DXpeditions on their way. DXpeditions make possible all time new DXCC entities for some and new band entities/countries for many. Yet, many DXpeditions are undertaken only when sufficient "seed money" is pledged to render them possible, and that is where an organization like INDEXA comes into play.

A visit to their web site at [www.indexa.org](http://www.indexa.org) will provide an informative overview of our organization and our DXing history. The web site also provides information on how to join electronically or by mail.



STARS has been designated a Special Service Club by the ARRL.

## STARS MARCH VE SESSION

STARS will be holding a VE Test Session on Saturday March 8th. The session will be held at the Hamburg Youth Center (corner of Prospect and Hawkins Aves.)



All candidates should arrive by 9AM. Walk-ins will be allowed, but pre-registering will help speed up the processing the day of the test.

All candidates should bring the following to the test session:

1. An original photo ID or two other original forms of ID, plus a photocopy of the ID(s) to be turned in to the examiners for their records.
2. Your current amateur radio license (if any) plus a photocopy of it.
3. The original copies of any applicable Certificate of Successful Completion of Examination (CSCE) plus a photocopy of each.
4. A test fee of \$14.00
5. Your Social Security Number (SSN) or your FCC Federal Registration Number (FRN). Your application for a new or upgraded amateur radio license will be rejected by the FCC if you do not provide one of these numbers.

For more information, or to register for the test, contact John Crawford KB2VWC 649-5933.

## STARS MEMBER BADGES

Instead of membership cards, we've made up member badges for 2008. They were available at the February meeting and will again be available at the March meeting. For those who can't make it to this month's meeting, I will be mailing them out (along with our repeater rules/codes).

If you forgot to renew yet, a renewal application was included in the November Telstar and is available for download on our website at [www.wb2elw.com](http://www.wb2elw.com) in the "Library" section.

Send the completed application along with your dues check made payable to STARS to me at:

Judy Levan N2TEZ  
120 University Blvd.  
Depew, NY 14043-2874

## CLUB MEETINGS

Club meetings are held on the first Thursday of the month at 7:00PM at either the Hamburg Youth Center (Prospect and Hawkins Avenues) or the NIKE Base Club Station.

Board meetings are held on the fourth Thursday of the month at the Nike Base Club Station at 7:30PM and are open to all club members.

## CLUB NETS

STARS club nets are open to all to exchange information on local amateur radio activities.

STARS WB2EZU Memorial HF net meets at 10AM local time on Saturdays on 3.925 MHz +/- QRM. Bob Lehning WA2YSJ is usually the net controller.

STARS co-sponsors, along with WB2JPQ, the Sunday morning RagChew Net at 9:30AM on 28.380 Mhz.

STARS 2m Net: Thursday at 7PM (except general meeting nights). George N2NOB is the net controller.

## 2008 FIELD DAY WEBSITE NOW ONLINE



The official [2008 ARRL Field Day Web page](http://www.arrl.org/FieldDay) is up and running at [www.arrl.org/FieldDay](http://www.arrl.org/FieldDay).

The page includes a summary of available resources, with links to Field Day forms and rules, logos and reference links. There is also a link for ordering commemorative Field Day T-shirts, pins and other supplies.

## KOSOVO AND DXCC

Over the past weekend, Kosovo declared its independence from Serbia, setting off new speculations on what this means to Amateur Radio and specifically, to the DXCC program. ARRL DXCC Manager Bill Moore, NC1L, said he understands that there are many questions about the DXCC status of Kosovo, especially concerning whether or not the new state will be added to the DXCC list.

Moore said the DXCC rules, modified in 2000 to better handle inclusion to DXCC, are clear on how additions can be made: "For inclusion in the DXCC List, certain conditions must be met. Gaining entry on the DXCC List is not contingent upon whether operation has occurred or will occur, but only upon the qualifications of the Entity."

According to Moore, adding Kosovo to the DXCC List would be considered under the "Political Entity" DXCC guidelines. The DXCC rules state that "Political Entities are those areas which are separated by reason of government or political division. They generally contain an indigenous population which is not predominantly composed of military or scientific personnel."

Kosovo, according to the DXCC rules, would then be added to the DXCC List as a Political Entity if it meets one or more of the following criteria:

- The entity is a UN Member State.
- The entity has been assigned a call sign prefix bloc by the ITU. (The exceptions to this rule are international organizations, such as the UN and ICAO. These Entities are classified under Special Areas, 3.a; and Ineligible Areas, 4.b.) A provisional prefix bloc assignment may be made by the Secretary General of ITU. Should such provisional assignments not be ratified later by the full ITU, the Entity will be removed from the DXCC List.
- The Entity contains a permanent population, is administered by a local government and is located at least 800 km from its parent. To sat-

## HAPPY MARCH BIRTHDAY!



Wayne Carpus W2ZDP  
— March 18  
Ed Taublieb KB2KVA  
— March 20

isfy the "permanent population" and "administered by a local government" criteria of this sub-section, an Entity must be listed on either (a) the US Department of State's list of "Dependencies and Areas of Special Sovereignty" as having a local "Administrative Center," or (b) the United Nations list of "Non-Self-Governing Territories."

"New Entities satisfying one or more of the conditions above will be added to the DXCC List by administrative action as of their 'Event Date.' Kosovo will be added to the DXCC list if it becomes a member of the UN, or if it receives a prefix bloc from the ITU. The third condition does not apply," Moore said. "The 'Event Date' will be either the date Kosovo became a UN member or it receives its prefix from the ITU."

- ARRL News

## DATES TO REMEMBER

March 6th—General STARS Meeting  
March 8th—STARS VE Session  
March 27th—STARS Board Meeting

## STARS Board of Directors

President	Keith Patterson KC2DGC
Vice President	Scott Barto KB2KOL
Treasurer	Jack Cullum KB2ESM
Fin. Secretary	Judy Levan N2TEZ
Secretary	Wayne Carpus W2ZDP
Director	John Crawford, Sr. KB2VWC
Director	Ken Pokigo KC2AYK
Past President	Bob Koster KA2WYE

## ARATS 2008 SWAP MEET

Tuesday, March 18, 6:30 - 9:30 P.M

Sweeney Hose Vol. Fire Co.

499 Zimmerman Street (Near Erie Ave.)

North Tonawanda, NY

TALK-IN: W2SEX/R 146.955 (-) PL 151.4

Tables: \$1.00 (Yes, One Dollar!)

Contact Bill, N2WUT, 692-1962

Sponsored by the Amateur Radio Association  
of the Tonawandas

Refreshments will be available (Tea, Coffee,  
Soft Drinks, Donuts)

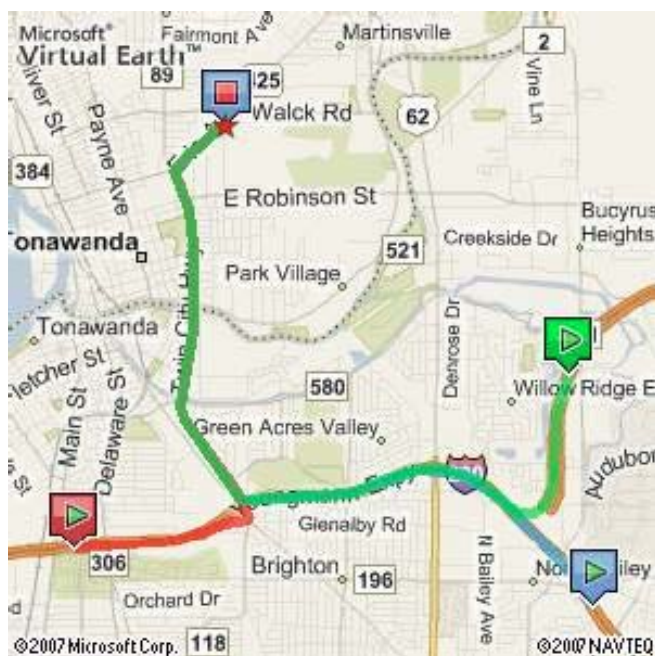
Sales limited to radio/electronics related  
items only. NO sales of non-related items  
such as knickknacks and NO illegal items such  
as pirated software, decoder boxes, etc.

ARRL memberships and renewals will be  
available!

For more information contact:

Bill, N2WUT, Event Chairman, 692-1962

John, KC2HMZ, PR Chairman, 472-1024



## GREATER BUFFALO HAMFEST

Sunday March 02, 2008

Ismailia Shrine Center

1600 Southwestern Blvd RT 20

West Seneca, NY 14224

Talk In 147.255 + pl 107.2

Information & Reservations

Hamfest Web Site: [gbhamfest.hamgate.net](http://gbhamfest.hamgate.net)

Indoor Table Reservations for sellers:

Can be made on line on the hamfest web site

Contact Chuck KC2BLH at:

Email: [kc2blh@aol.com](mailto:kc2blh@aol.com)

Phone: 716- 825-7097

Admission: only \$7

Sponsored By:

The Lancaster Amateur Radio Club

Large Indoor Hamfest ◊ Breakfast & Lunch

ARRL Talks / Forum & Demos

Hourly Drawings ◊ VE Test Session



## MARCH SPECIAL EVENTS

**Mar 1-Mar 2, 1500Z-2100Z**, Arlington Heights, IL. Peace Corps Amateur Radio Club, KA9NLX. To honor Peace Corps volunteers, their service and sacrifice. 21.360 14.290 10.125 7.270. Certificate. John Paskevich, 1423 N Ridge Ave, Arlington Heights, IL 60004. *Also 2-meter simplex in the Chicago area.*  
[jpaskev@aol.com](mailto:jpaskev@aol.com)

**Mar 7-Mar 9, 1400Z-1100Z**, Sweetwater, TX. Nolan County Amateur Repeater Association, W5NCA. 50<sup>th</sup> Year Sweetwater Jaycees World Largest Rattlesnake Roundup. 14.245 7.275 7.245. Certificate. Gary Armstrong, 806 E 16th, Sweetwater, TX 79556.  
[www.rattlesnakeroundup.net](http://www.rattlesnakeroundup.net)

**Mar 7-Mar 10, 2000Z-2200Z**, Two Harbors, CA. Palos Verdes Amateur Radio Club, K6PV. IOTA expedition to Santa Catalina Island. 20M 40M 75M phone bands. QSL. Palos Verdes Amateur Radio Club, PO Box 2316, Palos Verdes, CA 90274. [www.palosverdes.com/pvarc](http://www.palosverdes.com/pvarc)

**Mar 8, 1500Z-2100Z**, Vero Beach, FL. Vero Beach Amateur Radio Club, W4OT. Commemorating America's First Wildlife Refuge, 105 Years. 14.240 14.060 7.240 7.060. QSL. W4OT - Vero Beach ARC, PO Box 2082, Vero Beach, FL 32961. *From the Refuge on The Barrier Island, west of route A1A.* [www.fws.gov/pelicanisland](http://www.fws.gov/pelicanisland)

**Mar 8, 1700Z-2359Z**, San Diego, CA. USS Midway CV-41 Museum Radio Room, NI6IW. Commemorating the Naval Aviator designation established in 1915. 14.325 7.250 14.060 7.040. QSL. USS Midway CV-41 Museum Radio Room, 910 N Harbor Dr, San Diego, CA 92101. [kc2gyv@yahoo.com](mailto:kc2gyv@yahoo.com)

**Mar 8-Mar 9, 1700Z-0300Z**, Florence, SC. Florence Amateur Radio Club, N4B. 50<sup>th</sup> Anniversary of the Atomic Bombing of Mars Bluff, SC. 28.330 14.290 7.263 3.920. Certificate. FARC - Mars Bluff Certificate, PO Box 5602, Florence, SC 29502-5602. *Times are daily. Other frequencies may be used.*  
[www.w4ulh.org](http://www.w4ulh.org)

**Mar 22-Mar 23, 1500Z-2300Z**, Corona, NY. Hall of Science Amateur Radio Club, WB2JSM. HoSARC 35<sup>th</sup> Anniversary. 21.300 14.250 7.225 3.800. Certificate. Hall of Science Amateur Radio Club, PO Box 150131, Kew Gardens, NY 11415. [www.hosarc.org](http://www.hosarc.org)

**Mar 22-Mar 23, 1700Z-0300Z**, Fairport Harbor, OH. Sponsored by KB8QID, W8S. Spring Lights QSO party. 14.255. Certificate. Joe Kulnane, 1388 Summit Dr, Mayfield Hts, OH. [jmkulnane@sbcglobal.net](mailto:jmkulnane@sbcglobal.net)

**Mar 29, 1300Z-1600Z**, Brampton, ON. Peel and Mississauga Amateur Radio Clubs, VE3XR. Ham-Ex Annual Hamfest. 14.265 7.260 3.750. QSL. Jeff Richardson, VA3QSL, 36 Crawley Dr, Brampton, ON L6T 2S1, CANADA. *(Remember, US postage not valid in Canada.)* [www.ham-ex.org](http://www.ham-ex.org)

**Mar 29, 1500Z-2200Z**, Macon, GA. Macon Amateur Radio Club, W4BKM. 26<sup>th</sup> Annual Macon Cherry Blossom Festival. 14.240 7.055 10.110 14.055. Certificate. MARC, PO Box 4862, Macon, GA 31208. [members.cox.net/w4bkm](http://members.cox.net/w4bkm)

**Mar 29-Apr 12, 0000Z-2359Z**, Paris, France. ARP Radio-Club de Paris, TM2I. 40<sup>th</sup> anniversary of the "Ville de Paris". 14.275 10.110 7.075 3.775. QSL. Association des Radioamateurs de Paris, ARP Radio-Club de Paris, 66 Avenue de la Republique, Paris 75011, FRANCE. *Award available for contact with all 5 special event stations. See URL for complete details.*  
[arp75.free.fr/PortailARP/img/DVP\\_regles\\_rules.jpg](http://arp75.free.fr/PortailARP/img/DVP_regles_rules.jpg)

## MARCH CONTESTS

**Mar 1-2 — ARRL International DX** — Phone; 1.8-28Mhz; Exchange: RS and state, province or power; [www.arrl.org/contest](http://www.arrl.org/contest)

**Mar 1-2 — Open Ukraine RTTY Championship** — Digital; 1.8-28Mhz; Exchange: Regional abbreviation and serial; [www.ucc.zp.ua](http://www.ucc.zp.ua)

**Mar 2 — DARC 10-meter Digital "Corona"** — Digital; 28Mhz; Exchange: RST and serial; [www.darc.de/referate/dx/cqdlcont/fgdcc.htm](http://www.darc.de/referate/dx/cqdlcont/fgdcc.htm)

**Mar 8 — AGCW QRP Contest** — CW; 3.5-28Mhz; Exchange: RST, serial, category, AGCW number or NM; [www.agcw.org](http://www.agcw.org)

**Mar 8-9 — RSGB Commonwealth Contest** — CW; 3.5-28Mhz; Exchange: RST and serial (Commonwealth only); [www.rsqbfcc.org](http://www.rsqbfcc.org)

**Mar 8-9 — Idaho QSO Party** — Phone, CW, Digital; 1.8-28Mhz, 50-440; Exchange: RS(T) and S/P/C; [www.nt4tt.com](http://www.nt4tt.com)

**Mar 8-9 — EA PSK31 Contest** — Digital; 3.5-28Mhz; Exchange: RST + serial or EA province; [www.ure.es](http://www.ure.es)

**Mar 8-9, 12 — Oklahoma QSO Party** — Phone, CW, Digital; 3.5-28Mhz; Exchange: RS(T) and OK county or S/P/"DX"; [www.okdxa.org](http://www.okdxa.org)

**Mar 9 — North American RTTY Sprint** — Digital; 3.5-14Mhz; Exchange: both call signs, serial, name, and S/P/C; [www.ncjweb.com](http://www.ncjweb.com)

**Mar 9-10 — Wisconsin QSO Party** — Phone, CW, Digital; 3.5-28Mhz, 50 and up; Exchange: S/P/C or WI county; [www.warac.org](http://www.warac.org)

**Mar 11, 15 — CLARA and Family HF Contest** — Phone, CW; 3.5-21Mhz; Exchange: RS(T), name, QTH, and CLARA; [www.clara.comm.sfu.ca/contest.html](http://www.clara.comm.sfu.ca/contest.html)

**Mar 15 — 10-10 Mobile QSO Party** — Phone, CW, Digital; 28Mhz; Exchange: Call, name, county and S/P/C, 10-10 number; [www.ten-ten.org](http://www.ten-ten.org)

**Mar 15-16 — Russian DX Contest** — 1.8-28Mhz; Exchange: RS(T), serial or oblast abbr; [www.rdx.org](http://www.rdx.org)

**Mar 15-17 — Virginia QSO Party** — Phone, CW, Digital; 1.8-28Mhz, 50-440; Exchange: Serial and VA county/city or S/P/C; [www.qsl.net/sterling/VA\\_QSO\\_Party](http://www.qsl.net/sterling/VA_QSO_Party)

**Mar 16 — QRP ARCI HF Grid Square Sprint** — CW; 3.5-28Mhz; Exchange: RST, 4-digit grid square, QRP ARCI number; [www.qrparci.org](http://www.qrparci.org)

**Mar 16 — 9KCC Contest** — Phone, CW; 21Mhz; Exchange: RS(T) and serial; [www.9k2hn.com/9kcc](http://www.9k2hn.com/9kcc)

**Mar 22-24 — BARTG Spring RTTY Contest** — Digital; 3.5-28Mhz; Exchange: 3-digit serial and 4-digit time; [www.bartg.org.uk](http://www.bartg.org.uk)

**Mar 29-30 — CQ WPX SSB Contest** — Phone; 1.8-28Mhz; Exchange: RS and serial; [www.cqwpix.com](http://www.cqwpix.com)

## AMATEUR RADIO EXAMINATIONS

STARS will be holding test sessions in 2008 on: 3/8, 5/10, 7/12, 9/13, and 11/8. For information or to pre-register for STARS tests, contact John Crawford KB2VWC at 649-5933.

LARC Holds it's VE tests on the last Tuesday of selected months (usually every other month). Test sessions are held at 7:00 PM, at the Lancaster Office of Emergency Management at 525 Pavement Rd, Lancaster. Pre-registration is requested for all sessions, but not required. Contact John Maxwell W2JM at maxwell@buffalo.edu / OR - Joseph Gearhart WV2NY at : 894-2407 / wv2ny@roadrunner.com .

ARATS will be hold test sessions on the first Saturday of the month (except when falling on a holiday weekend, when they will be on the second Saturday) starting promptly at 10AM at the North Tonawanda Fire Headquarters at 495 Zimmerman Street. Walk-ins accepted, pre-registration is highly recommended. For information on or to pre-register for ARATS exams, call Vic Godzik K2YW at 694-9738 or email k2yw@hotmail.com.

PROS holds test sessions as needed at 585 North Star Road, East Aurora. For information, contact Pat Murray NW2I at 652-8178.

## HAM RADIO TRIVIA

This month's questions come from H. Ward Silver NOAX. You can find more like these in QST or on the ARRL website.

- What has the lowest resistance at room temperature?
  - Silver
  - Copper
  - Gold
  - Hamfest customers
- In a "carbon comp" resistor, the "comp" is short for...
  - Compensated
  - Compendium
  - Nothing, it's just "comp"
  - Composition
- If your car battery voltage drops from 13 V to 9 V when you key your 25-W mobile rig, you might have a bad...
  - Headache
  - Cable or connector
  - Fuse
  - Ground Strap
- If a resistor has a 10% tolerance, what does it have a tolerance of?
  - Resistance value
  - Bad design
  - Power overload
  - Badly written quizzes
- Three known-value resistors are in a series connection. How many measurements does it take to determine the power dissipation of all three?
- Certain materials, when cooled to very low temperatures, become...
  - Extremely cold
  - Irritable
  - Superconductive
  - Hypoallergenic
- High voltage resistors are made in long, narrow packages to increase...
  - Power rating
  - Inductance
  - Voltage rating
  - Visibility
- The color-code sequence for resistor color bands is...
  - EGBDF
  - ROTFLMAO
  - ROTFLOL
  - BBROYGBVGV

- A resistor with a single, black band is...
  - A wire jumper
  - In mourning
  - Defective
  - Wirewound
- Wheatstone invented what type of resistive circuit?
  - Bridge
  - Rat-race mixer
  - Subjunctive clause
  - Toaster oven
- Negative resistance is a key feature of which component?
  - Dean drive
  - Tunnel diodes
  - Channel Tunnel diodes
  - Gyrotrons
- What is the end-to-end resistance of 10 feet of 50 ohm coaxial cable?

### Bonus Question!

In the "old days", what common household item could be transformed into a stable resistor with a little whittling?

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### Answers to Trivia Quiz:

1-a-2-d—The resistive material is a mix, or composition, of carbon and other binding materials. 3-b—It only takes 1 ohm of total resistance in a cable to cause a 4-V drop at 1 amp. 4-a—A resistor's tolerance is the maximum variation above and below its nominal value. 5-only 1—Measure either voltage or current across the entire string, calculate total power dissipation for the summed resistance value as if it was a single resistor, then allocate to each resistor its share of the heat in proportion to its fraction of total resistance value. 6-c—a superconductor loses all resistance to current flow below a critical temperature. 7-c—High voltage resistors are specially made to keep applied voltages from arcing across them or leaking across them from terminal to terminal. 8-d—Black/Brown/Red/Orange/Yellow/Green/Blue/Violet/Gray/White from 0 to 9. 9-a—These are often used on PC boards loaded by automatic assembly equipment. 10-a—The Wheatstone bridge is the basis for many sensitive instruments and strain-gages. 11-b—The tunnel, or Isaki, diode shows a negative dynamic resistance, decreasing forward voltage with increasing forward current, and makes a novel amplifier or oscillator. 12-Less than 1 ohm. A cable's impedance rating refers to its characteristics as a transmission line. Bonus Answer-A pencil Many years ago, pencil leads could be pressed into service as high-voltage resistors and they were cheaper than the real thing.

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