MOUNTAIN SPARK GAPS

NPARC—The Radio Club for the Watchung Mountain area

Website: http://www.nparc.org
Club Calls: N2XJ, W2FMI

VOLUME 46 September 2011 NO. 9

UPCOMING EVENTS

Regular Meetings

Tue. October 11 & Mon. 24 7:30 PM
Salt Brook School

Upcoming Events

Trip to
Battle Ship New Jersey
in Trenton
October 1, 2011

Berkeley Heights Kid's Day
January 8, 2012

Meeting Schedule

Regular Meeting: 7:30—10:30 PM
2nd Monday of each month at the
Salt Brook School Cafeteria
Springfield Ave. and Maple St.
New Providence

Informal Project Meeting: 7:30—9:00 PM
4th Monday of each month at the
Salt Brook School Cafeteria
Springfield Ave. and Maple St.
New Providence

Everyone is Welcome
If a normal meeting night is a holiday, we usually meet the following night.
Call the contacts below.
When Schools are closed,
Meetings are held in the Recreation Department Meeting Room in Borough Hall

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Club Officers for 2011

President: N2KDK Paul Campano
908-508-9595
Vice Pres.: K2MUN David Berkley
908-500-9740
Secretary: K2JV Barry Cohen
908-464-1730
Treasure: K2YG Dave Barr
908-277-4283
Activities: KC2OSR Sam Sealy
973-635-8966

On the Air Activities

Club Operating Frequency
145.750 MHz FM Simplex

Sunday Night Phone Net
Murray Hill Repeater (W2LI) at 9:00 PM
Transmit on 147.855 MHz
With PL tone of 141.3 Hz
Receive on 147.255 MHz
Net Control K2AL

Club Internet Address

Website:http://www.nparc.org
Webmaster K2MUN David Berkley
Reflector: nparc@mailman.qth.net
Contact K2UI, Jim

MOUNTAIN SPARK GAPS

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The Watchung Mountain Area Radio Club
P.O. Box 813
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Editor: K2EZR Frank McAneny
Contributing Editors:
WB2QOQ Rick Anderson
WB2EDO Jim Brown

Climatological Data for New Providence for August 2011

The following information is provided by Rick, WB2QOQ, who has been recording daily weather events at his station for the past 29 years.

TEMPERATURE -
Maximum temperature this August, 93 deg. F (August 1)
Last August(2010) maximum was 95 deg. F.
Average Maximum temperature this August, 82.0 deg. F
Minimum temperature for this August, 55 deg. F (August 23, 29, 30)
Last August(2010) minimum was 56 deg. F.
Average Minimum temperature this August, 64.1 deg. F
Minimum diurnal temperature range, 4 deg. (70 - 66 deg.) 8/14; (71 - 67 deg.) 8/15
Maximum diurnal temperature range, 26 deg. (93 - 67 deg.) 8/1.

Average temperature this August, 73.1 deg. F
Average temperature last August, 75.4 deg. F

PRECIPITATION -
Total precipitation this August - 17.2" rain.
Total precipitation last August - 3.05" rain.

Maximum one day precip. event this August; August 28; 6.25" rain.
Measurable rain fell on 15 days this August, 11 days last August.
Hurricane Irene dumped 8.72" of rain on Aug. 27, 28 at this station.
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Rick Anderson
9/15/11

243 Mountain Ave.
New Providence, NJ
(908)464-8911
rick243@comcast.net

Lat = 40 degrees, 41.7 minutes North
Long = 74 degrees, 23.4 minutes West
Elevation: 380 ft.
CoCoRaHS Network Station #NJ-UN-10

MISCELLANEA

Berkeley Heights 10K Run. 9/18

ERT Members , supplemented with Bill Pointon, WA2CG

Trip to Ham Radio Outlet in Delaware

Bill WA2CG, Frank K2EZR, Paul W2PTP, Stu N2YMI and Barry,K2JV

MISCELLANEA

Table at Belleview Hospital in New York.
Have they something against VHF?
Thanks to AE3A

KC2ONP at Northeastern University in Boston. Study hard Nick—that first semester sets the standard for the rest.

Ever wonder how the Transistor got its name? Real On.

BELL TELEPHONE LABORATORIES INCORPORATED ~~B.T.L.—CONFIDENTIAL~~

COVER SHEET FOR TECHNICAL MEMORANDA

SUBJECT: Terminology for Semiconductor Triodes - Committee Recommendations - Case 38139-8

COPIES TO:

1 -Dept. 1000 File
2 -R.Bown - Case File
3 -R.K.Potter
4 -J.R.Wilson
5 -C.W.Gilman
6 -J.W.McRae
7 -H.S.Black
8 -H.C.Hart
9 -R.C.Mathes
10 -C.B.Feldman
11 -W.E.Kock-R.L.Wallace
12 -J.A.Becker-J.N.Shive
13 -W.Shockley
14 -J.H.Scaff-W.G.Pfann
15 -J.A.Bardeen
16 -W.H.Brattain
17 -A.C.Norwine-D.M.Chapin
18 -A.J.Rack-S.E.Michaels
19 -F.Gray
20-J.R.Pierce
21-J.G.Kreer
22-J.O.Edson
23-M.E.Mohr
24-L.A.Meacham
25-C.O.Mallinckrodt
26-H.L.Barney-E.Dickten

THIS COPY FOR

MM-48-130-10
DATE May 28, 1948
AUTHOR L.A.Meacham
C.O.Mallinckoodt
H.L.Barney

Surface States - Terminology

~~ABSTRACT~~

Recommendations are made for an equivalent circuit representation, and terminology relating to semiconductor triodes.

~~B.T.L.—CONFIDENTIAL~~

Terminology for Semiconductor Triodes - Committee Recommendations - Case 38139-8

MM-48-130-10

May 28, 1948

MEMORANDUM FOR FILE

This memorandum is a report of the recommendations of a committee which was set up* for the purpose of standardizing the terminology relating to semiconductor triodes. The need for such standardization is apparent, and it is hoped that these recommendations will be useful either in providing a generally acceptable terminology, or in stimulating discussion which will lead to nomenclature which can be standardized.

1. Name

On the subject of a generic name to be applied to this class of devices, the committee is unable to make an unanimous recommendation. A discussion of some proposed names is given here.

Semiconductor triode. This is considered to be a fairly good name, being satisfactorily descriptive, but a shorter name would be preferable. The "triode" describes the three element device; if more elements were added it might be a tetrode or pentode, for instance. A single point contact rectifier might be referred to as a semiconductor diode in line with this terminology.

Surface States triode. This is in the same class as the first name suggested above; it is descriptive, but is not brief.

Crystal triode. The objection to this is that the term "crystal" is usually associated with the piezoelectric types, such as quartz.

Solid triode. This has the advantage of brevity, and is descriptive in the sense that the device may be explained by the physics of the solid state, and also that the active

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*At a conference held May 6, 1948, reported in a letter to Messrs. J. W. McRae and R. K. Potter dated May 10, 1948 - Case 38139-8 by W. E. Kock.

element is a solid rather than vacuum or gas filled. However, the word "solid" also commonly means sturdy, massive, rugged, or strong, which terms are contradictory to the actual physical characteristics of the unit.

Iotatron. This term satisfactorily conveys the sense of a minute element, as contrasted to the previous name. However, in view of the many vacuum or gas filled devices such as thyratrons, dynatrons, transitrons, etc., it lacks the distinguishing property which would differentiate it from such devices.

Transistor. This is an abbreviated combination of the words "transconductance" or "transfer", and "varistor". The device logically belongs in the varistor family, and has the transconductance or transfer impedance of a device having gain, so that this combination is descriptive.

If a general term ("transistor", for example) were adopted for the entire class of semiconductive devices, there would be considerable merit in having additional descriptive terms for particular sub-classes. To illustrate, there might someday be a "120B transistor", which was a "germanium triode", and a "196A transistor" which was a "silicon diode", etc. A "germanium tetrode" has already been explored with some promise, and many other variations are likely to appear as time goes on.

In view of these considerations, it is the recommendation of the committee that the particular device with which we have worked so far; that is, a germanium block with two point contacts, be referred to as a germanium triode.

For the purposes of this memorandum, the device will be referred to in more general terms as a semiconductor triode.

Accompanying this memorandum is a ballot. It is suggested that each person to whom the memorandum is routed, fill out the ballot and return it, in order that the resultant vote may be used by the committee as the basis of a recommendation for a generic name.

BALLOT

Designate by the numbers 1, 2 and 3, the order of your preference for the names listed below:

____ Semiconductor Triode

____ Surface States Triode

____ Crystal Triode

____ Solid Triode

____ Iotatron

____ Transistor

____ _____(Other suggestion)

Comments:_____

Signed _____

Please return this ballot to Miss G. R. Callender in 1A-323 at Murray Hill.

This paper comes courtesy of Dave, AC2ALG. Simply reading the distribution is a lesson in the history of solid state physics. Thanks Dave

SCIENTIFIC TIDBITS

PC Control for Your Eyes Only

Engineers in Sweden have developed an eye-tracking technology that enables a user to control a laptop computer with eye movements. With the system, a user's eyes can operate menus, select icons, open files, play music and view pictures. According to the developers, it's the first time such technology has been applied to a computer. It also recognizes when a user is not looking at the computer and automatically goes into energy saver mode. It restarts when the user glances at the screen again. What a great development this is for the disabled community.

A New Use for Silk

Silk has been used in electronic displays by researchers in Taiwan who say it could be incorporated into e-readers, LED screens and radio-frequency identification technology. They developed a technique that turns silk into insulators for flexible thin-film transistors, with the potential to improve their performance as well as lower their cost. It this system begins to increase the demand for silk, it might be wise to invest in a silk worm farm.

Car Steering Based on Thoughts

German engineers have developed a brain-computer interface system that lets someone steer a car just by thinking about it. Before driving, a person must first practice moving virtual objects on a computer screen using an electroencephalograph, or a "neuroheadset," which the engineers adapted from a system originally designed for use with video games. Once in the car, the driver turns the car left or right by thinking about moving an on screen object in either direction. This is a very scary development when one considers the fact that the majority of drivers on the road today have absolutely no concentration ability at all. How about all those who like to talk on their cell phone while driving?

Jim WB2EDO