

March 2003

# FEEDBACK



The OFFICIAL Newsletter

of the

# Georgian Bay Amateur Radio Club Inc.

P.O. Box 113, Owen Sound, Ontario N4K 5P1

## GBARC Meetings

are held on the 4th Tuesday of every month except July and August in our CLUBHOUSE, Unit 6 Rockford Plaza, Rockford On. 5km S of Owen Sound. 7:30 p.m.

## Breakfast Anyone?

Any Saturday 9:00 a.m., at the Rockford Restaurant.

## Nets

80 metre net on Sunday at 9:30 a.m. on 3.783 Mhz. Two metre net on Thursday at 9 p.m. on VE3OSR 146.94-Mhz.

## Submissions

are always welcome. Send them to Barry/Steven

## This Month

MINUTES OF MEETING

SPECIAL NOTES FROM MARCH 4, 2003 MEETING

HAM RADIO TRIVIA

MESSAGE FROM THE NEWSLETTER TEAM

GBARC Mail Box

**NEXT MEETING April 2**

### President

Bernie  
VE3BQM



### Vice-President

Bob  
VE3XOX



### Secretary

Susan  
VE3TLK



### Treasurer

Bob  
VE3LKD



### Newsletter Team

Editor  
Barry VA3WBG



### Newsletter Team

Mailing  
Steven VE3SEG



### Newsletter Team

Mailing  
Tom VE3CVL



# GEORGIAN BAY AMATEUR RADIO CLUB MINUTES OF MEETING

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Georgian Bay Amateur Radio Club

Minutes of February 25, 2003

The meeting was called to order by President Bernie BQM at 7:30 PM. Everyone was welcomed.

Attending: Barry va3wbg, Steven ve3seg, Kate va3kte, Daniel va3boy, Arlene va3atk, Tom ve3cvl, Dave ve3dxo, Stan va3zon, Walter & YL ve3ffn, Tom ve3tsa, Dieter va3dst, Bob ve3nx, Bernie ve3bqm, Susan ve3tlk, Jonathon ve3jaf, Tom ve3nem.

The treasurers report was given by Bernie BQM.

Discussion GBARC budget.

Discussion re: Keeping or Closing the Clubhouse in Rockford.

Special planning meeting, Thursday March 4, 2003.

Meeting adjourned at 9:34 PM motion by Tom va3ts, 2nd by Tom va3cvl.

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## SPECIAL NOTES FROM MARCH 4, 2003 MEETING

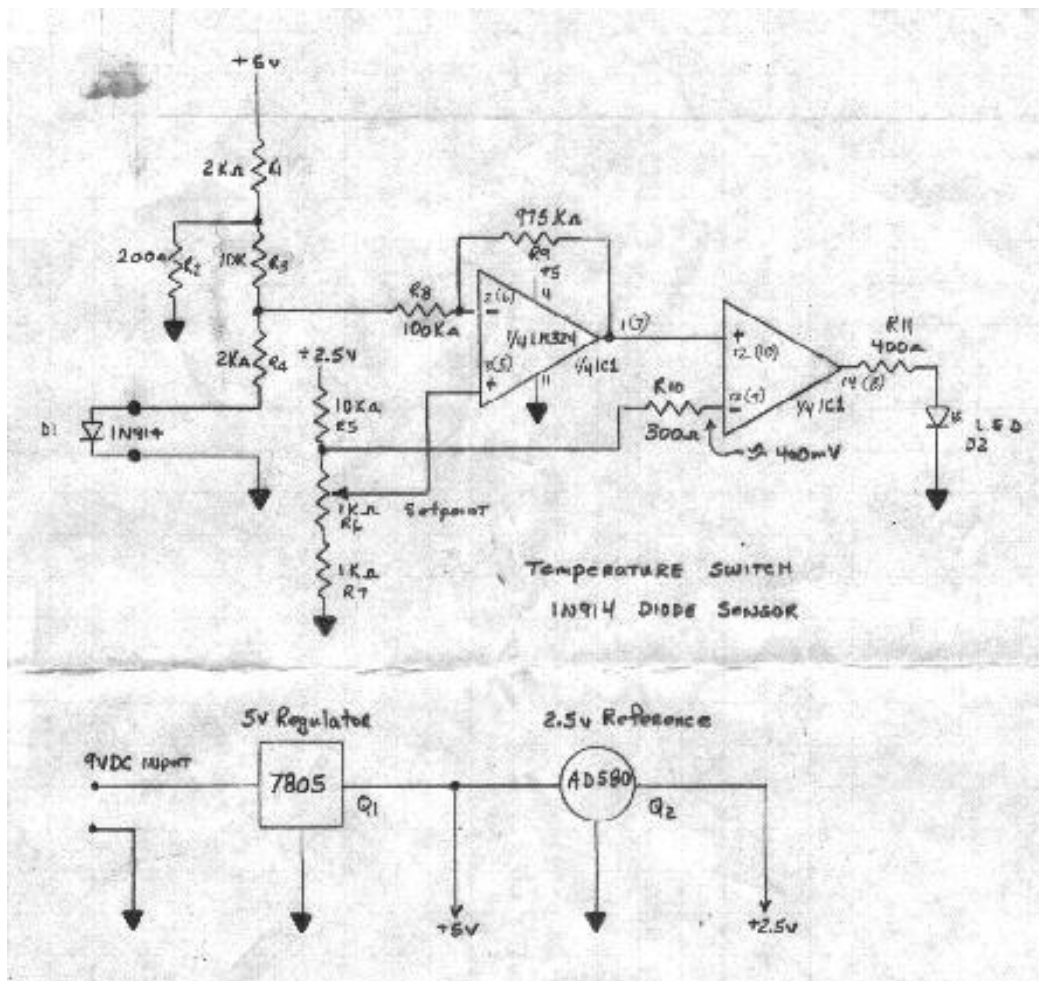
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A **notice of motion** was raised by Tom TSA and seconded by Joe JNA to **terminate the lease of the clubhouse**. This issue will be brought up and voted on at the next regular club meeting on March 25. Due to the importance of this issue all club members are encouraged to try and attend this meeting.

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# DIODE SENSOR TEMPERATURE SWITCH

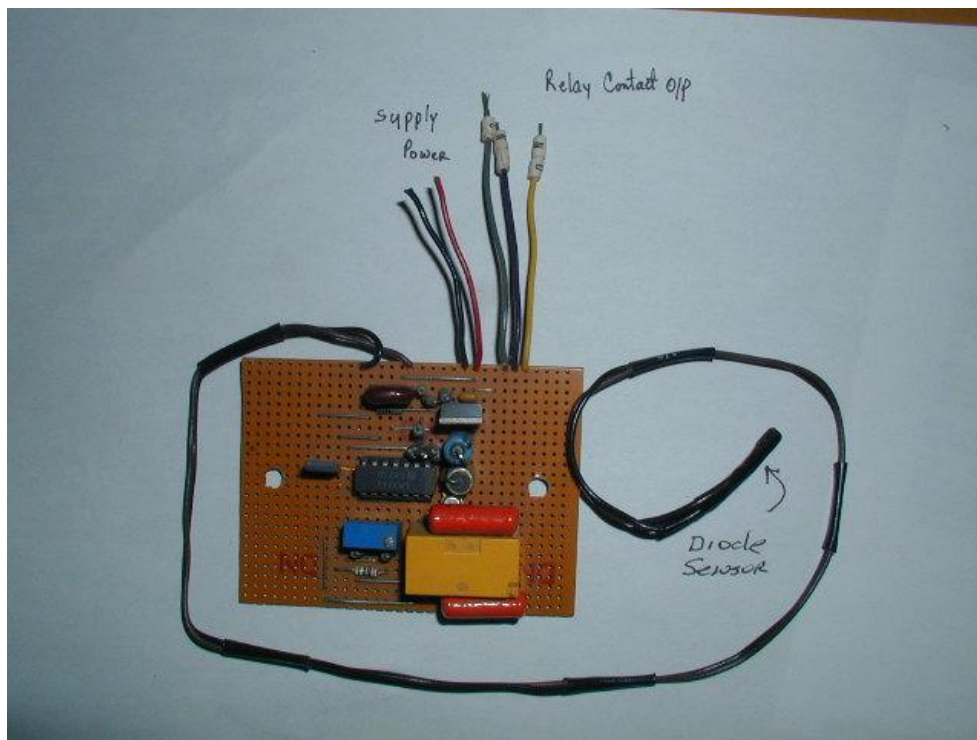
Here's a circuit I brewed up back in 1998. The circuit will operate a LED or relay in response to the temperature of the sensor. In this case it's an ordinary 1N914 diode. Now the whole thing is counting on the fact that the diode is an imperfect thing and we are going to detect this imperfection and use it to our advantage. The fly in the ointment is that the diode isn't all that bad and its' change we can detect and use is fairly small. So the diode wouldn't be much use as a temperature readout but we can use it as a switch. The circuit below starts of on the left with the 1N914 diode. The resistors above it are there to set the voltage on the anode of the diode somewhere around 0.6 or 0.7 volts DC. You don't want the diode biased hard on. This will cause self heating of the device, not a good feature for a temperature sensor. The circuit simply causes a voltage change at the junction of R3 and R4 when the diodes' temperature changes. You can test this by putting your fingers on it or bringing the tip of the soldering iron near it. This change is detected by the 1st LM324, amplified about 10 times and sent to the second LM324.



(This 14 pin chip actually has 4 of the amplifiers in the one chip, you could make 2 separate switches.) This second amp has a very high gain, something like 10000 and behaves like a switch. You can see that the minus input has a note there that it is pegged at approx 400mV. (That's millivolts) So whenever the plus input goes higher than 400mV, the output will swing from nearly ground to almost the supply voltage (5v) delivering current to the LED (light emitting diode). It will do the opposite when the plus input goes below 400mV. The last point of interest is the "setpoint" control. This variable resistor determines the switch point of the second amp by varying when the first amps output is at 400mV when the temperature sensor is at a certain temp. So we could put the sensor at some test temp and adjust the setpoint pot till the LED D2 comes on. Then if we take the sensor away from the heat the LED should go off.

The power supply for the device is composed of Q1, a 7805 regulator chip. These things can take up to 18 volts input and the output will stay at 5 volts, nifty and a lot cheaper and smaller than building your own. It supplies the power needed for the amps and the output LED. The next device Q2 is an Analog Devices AD580 2.5vdc voltage reference. These are very stable regulators when you want to keep an output within a few millivolts. You will see that this is used as a reference voltage for the setpoint pot and the second amplifier to keep the voltage nice and stable.

I originally built this to operate a fan when the power supply heatsink got to a certain temperature. It could be also be used as a Freezer alarm



# HAM RADIO TRIVIA

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## Answers of the February's Ham radio trivia

1.=2 Tuned, Not Tuned 2=1 QRC 3=1924

1. What is a rover?

A dxpedition moving between locations
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A station handling traffic, off frequency
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A station that operates from several grid squares during a contest
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An amateur satellite in low-earth orbit
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2. What was the callsign of the Titanic?

MGY
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TIC
-----

GMY
-----

TITANIC
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3. What is a "mill," in ham radio slang?

A type of telegraph key
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A machine for grinding quartz crystals
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A type of motor-generator set
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A typewriter
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Answers for these questions will appear in the April edition of the Feedback

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## MESSAGE FROM THE NEWSLETTER TEAM

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Have you made an interesting contact or read a really interesting article that you think others would like? well then what better way of doing that then in the GBARC newsletter. The GBARC newsletter is always looking for interesting stories so if you have one done be a chicken be a ham and send it to Steven VE3SEG and Barry VA3WBG and [ve3seg@rogers.com](mailto:ve3seg@rogers.com)

Do you have so ham equipment for sale or are you looking for something well then what a better place to do that then in the GBARC feedback. If you are looking for something or have something

for sale just send your name Callsign and what you have for sale to [ve3seg@rogers.com](mailto:ve3seg@rogers.com) where it will then be posted in the sale/wanted section of the GBARC feedback.

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# From The Mailbox

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## ZEROBEAT

**THE BRUCE AMATEUR RADIO CLUB NEWSLETTER**

IS NOW POSTED 73 DE JIM COVERLEY VE3OVV

<http://www.brucearc.on.ca>

When in Barrie stop in at the **Barrie Amateur Radio Club Meeting**

Georgian college, Rowntree Theatre

Date: TBA Time: 7:30 PM

73 de ken [ve3kpp](mailto:ve3kpp)

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