

**GMARC MEETING MINUTES 21-MAR-2017**  
**V2.2**

**I. Call to Order** by the President, Tony W8OKX at 7:03 PM.

**II. Introductions, Upgrades, and Visitors**

There were (4) Visitors. Tim KE8EJR, Carl N8AE, Ray W8PIE and Brian KC8KJL

**III. Minutes**

Minutes of the 21-Feb meeting were available at the meeting. Motion to approve February minutes by Mike W8MJC and seconded by Ron WD8MNX. Motion carried.

**IV. Treasurer's Report – Don K7SDF**

There was no Treasurer's Report offered by Don K7SDF and none was approved. Don stated that he is changing accounting to a month-end basis (not meeting-to-meeting), and he will present a report through 31-Mar-2017 at the April meeting.

**V. Membership Report – Bobby N8CY**

We have **48** members who have paid their 2017 dues, and **37** Heritage Members. The following members paid their 2017 Dues at the meeting:

Roberta K8NET	Del WW2MI	Tim KE8EJR	Dee N8UZE	Carl N8AE
Andy AC4EM	Lisa KB1IPV			

**VI. GMARC Web Site – Frank W8FKZ**

The GMARC Web Site has been completely redone in WordPress by Frank W8FKZ. The new web site is very aesthetic and it should be much easier to maintain the pages in the new system. Frank would like us to send pictures to him that can be used on the Web Site ([FrankSonye@comcast.net](mailto:FrankSonye@comcast.net)).

**VII. Inter-Club Liaison – Bobby N8CY**

<b>Cadillac Hamfest</b>	<b>6-May-17 Saturday 8:00 AM Cadillac, MI</b>
<b>Dayton HamVention</b>	<b>May 19-21, 2017 – Dayton, OH</b>
<b>Monroe Hamfest</b>	<b>18-Jun-17 Sunday 8:00 AM Monroe, MI</b>
<b>GMARC Lark-in-the-Park</b>	<b>20-Jun-17 Tuesday 3:00 PM – Riverbend Park Auburn Hills, MI</b>
<b>Michigan HamCon</b>	<b>Oct 7-8, 2017 – Michigan International Speedway</b> <a href="http://www.glhamcon.org">www.glhamcon.org</a>

**VIII. Technical Committee Report – Ron WD8MNX**

We have a new ArCom RC-210 controller (approx. cost \$600) courtesy of Ron WD8MNX that has been installed. This controller can control (3) devices and interconnect them; e.g. our UHF Repeater, VHF Repeater, and the Weather Radio. It has a total of 691 functions that can be programmed.

Ron noted that the 443.075 MHz repeater has an Effective Radiated Power (ERP) of 600-watts.

**IX. Presentation – FlexRadio Systems® FLEX-3000 Software Defined Radio (SDR) – Richard KC8HMJ [[www.FlexRadio.com](http://www.FlexRadio.com)]**

Richard KC8HMJ (with the assistance of Dick KE8BFF) made an interesting and informative presentation on the FlexRadio Systems® FLEX-3000 (SDR) Transceiver:



The FlexRadio FLEX-3000 transceiver is no longer produced as well as the FLEX-1500 QRP rig, and the more complex FLEX-5000. FlexRadio Systems® now manufactures (3) SDR transceivers as shown on their web site [www.FlexRadio.com](http://www.FlexRadio.com): FLEX-6300, FLEX-6500, and FLEX-6700 and SmartSDR software version 1.10.16 for Microsoft Windows®. Unfortunately, Systems® quit doing any software updates for their *orphaned* rigs with their new top-of-the-stack radios on the market: FLEX-6300, FLEX-6500, and FLEX-6700. (Sherwood Engineering Labs <http://www.sherweng.com/table.html>)

To take care of the software issues, an Amateur Operator – Darrin Kohn **KE9NS** of Bartlett, IL has been developing software on his own – PowerSDR v2.8.0.S12. His software is not just an upgrade – it provides many features that probably were not thought of by FlexRadio Systems®. He has several videos on his web site demonstrating the new features.

Rich said he considers KE9NS's work **and** talent to be nothing short of awesome:  
<http://ke9ns.com/flexpage.html>  
 eHam: <http://www.eham.net/ehamforum/smf/index.php?topic=108756.0>

The screenshot displays the PowerSDR software interface with the following elements:

- Top Panel:** Shows two VFOs. VFO A is at 3.686 500 MHz (75M Extra SSB TX) and VFO B is at 5.330 500 MHz. It includes a Scanner, Map, and various menu options like Setup, Memory, Wave, EQ, XGTRs, CWX, Mixer, ANT, ATU, FlexControl, ESC, QrxWr, TX WaterID, and Get Help.
- Center Panel:** Features a world map with signal strength contours and a waterfall display below it. The waterfall shows a strong signal at the VFO A frequency.
- Left Panel:** Contains tuning and filter controls such as FREQ, TUN, MIX, ATU, MUTA, BYP, REC, and FLX. It also has AGC (AGC-T, AGC-F, AGC-R) and SQL (SQL-10K) settings.
- Right Panel:** Includes two signal strength meters (SIG) showing -78 dBm and -200 dBm. Below them are mode selection buttons (LSB, USB, DSB, CW, CWU, FM, AM, SAM, SPEC, DIGL, DIGU, DRM) and a frequency list.
- Bottom Panel:** Shows a large array of controls for SPLIT, NR, ANI, and other functions. It also includes a TX Profile section with TX Power, TX Filter, and TX EQ settings.
- Bottom Section:** A blue banner with the text "Features added to the original v2.7.2" and the FlexRadio Systems logo.



All (3) radios require a personal computer for operation and for the Panadapter display – a panoramic display that attaches to your rig’s first IF stage and gives you the opportunity to look at the **whole** band your rig is tuned to (Up to 3-MHz). Tie that to some basic computerized rig control, and you have a powerful tool that will allow you to spot another station in real-time, click on that station, and your rig will *instantly* tune to that frequency!

The FLEX-1500 is not very fussy about the computer it is connected to. Rich noted that he has used an old notebook type computer on his rig with a combined tuner/amp – since this SDR does not have a built-in tuner nor more than 5-watts RF output.

The FLEX-3000 and FLEX-5000 transceivers require a computer that has an available *card slot* for a Firewire® card. Otherwise, the computer does not require anything special.

Sometimes, you can purchase a good *used* FLEX-3000 for just the price of a Panadapter for a K3 or K3S.

Rich stated that some “knob” radios come with an barely usable Panadapter. However FlexRadios, as well as other SDRs, provide other features not found on “knob” radios. For example, if you don’t like the appearance of your radio you can *change* the skin! Have you ever been able to *change* the **color** of your radio?

You can change the frequency on your radio in several different ways – including an optional (virtual) “knob” if desired. Another useful feature is that you never have to look at a Band Plan; i.e. you just look at the Panadapter display, and it shows whether you are in the Extra portion, shortwave portion, or WWV portion of the Band. The FLEX-3000 has 9 or 10 pre-set filters and 2 variable filters on receive.

For the demo, Richard and Dick KE8BFF used an Eagle One antenna (that is designed to be mounted on a Motor Home) but was mounted on a tri-pod.

FlexRadios offer many more features that may be of interest to Amateur Operators.

## **X. GMARC Embroidered Logo Gear**

Ken N8COQ ordered a Royal Blue Jacket Size L. Frank W8FKZ ordered a Royal Blue Jacket Size XL.

The following members ordered GMARC Navy Caps: Allen W8EAP. I ordered (3) Extra hats (\$9) – Navy Blue, but they will go fast (first come first served).

This order was placed on 31-Mar-2017 and was delivered on 10-Apr-2017.

I will place a **new** order for anyone who is interested in a Jacket (\$43), Polo Shirt (\$28), or Navy Hat (\$9). Jacket – Style **6047** (\$43) – Royal Blue is the most popular color – but available in 4-colors: Pewter Grey, Royal Blue, Black and Navy Blue up to Size 2XL, Polo Shirt Style **1140** (\$28) – available in 18-colors: Orange, Light Blue, Lime green, Kelly Green, Gold, Dark Green, Mint Green, White, Pale Yellow, Black, Burgandy, Navy Blue, Charcoal Grey, Royal Blue, Purple, Red, Bright Blue, and Teal Blue up to Size 6XL, and Style **1251** priced at \$22 – available in 5-colors: Dark Smoke Grey, Royal Blue, Black, Navy Blue, and Red up to Size 2XL, or Hat Style **8460** (\$9) – One Size Navy Blue. Queensboro has recently added some additional Polo Shirts: Style **1251** priced at \$22 – available in 5-colors: Dark Smoke Gray, Royal Blue, Black, Navy Blue, and Deep Red up to Size 2XL, Style **1143** (with pocket) priced at \$28 – available in 18-colors: Orange, Light Blue, Lime green, Kelly Green, Gold, Dark Green, Mint Green, White, Pale Yellow, Black, Burgandy, Navy Blue, Charcoal Grey, Royal Blue, Purple, Red, Bright Blue, and Teal Blue up to Size 6XL, and Style **1251** priced at \$22 – available in 5-colors: Dark Smoke Grey, Royal Blue, Black, Navy Blue, and Red up to Size 2XL and Style **1686** priced at \$18 – available in 5-colors: Charcoal,



White, Black, Navy Blue, and Pro Red up to Size 2XL. All items: There is an additional charge for Large Sizes: 2XL +\$2, 3XL +\$3, 4XL +\$4.

Queensboro also has T-Shirts (with and without a pocket) available if anyone is interested. For example, Gildan DryBlend T-Shirt Style **7280** priced at \$9 (Save 74%) – available in 12-colors: Carolina Blue, Heather Grey, Charcoal Heather, Tennessee Orange, Lime Green, Forest Green, Black, Royal Blue, White, Red, Navy Blue and Sapphire Blue up to Size 3XL. Gildan Classic Long Sleeve T-Shirt Style **7043** priced at \$11 (Save 75%) – available in 15-colors: Carolina Blue, Gold, Ash, Safety Orange, Safety Green, Dark Chocolate, Heather Grey, Forest Green, Red, Black, Navy Blue, Natural (Beige), Royal Blue, Purple, and White up to Size 3XL. Gildan Ultra Cotton T-Shirt Style **7047** priced at \$10 – available in 25-colors: Gold, Carolina Blue, Tangerine, Kelly Green, Orange, Heather Grey, Jack Dome (Green Teal), Heliconia Pink, Irish Green, Daisy (Beige), Maroon, Light Blue, Royal Blue, Purple, Natural (Beige), Pink, Black, White, Red, Lime Green, Sand (Beige), Ash (Grey), Forest Green, Navy Blue, and Sapphire Blue up to Size 5XL.

Dave W8DJH ordered a Polo Shirt Style **1140** in Charcoal Grey Size 3XL – \$31 .

### **XI. Presentation – Packard Proving Grounds – Bill N8SA**

Bill N8SA, who is a Trustee of the Packard Motors Foundation, gave a brief presentation about the history of Packard Proving Grounds and some of the facilities improvements that are underway.

### **XII. Old / New Business**

The first GMARC Saturday morning breakfast meeting was held 11-Feb-2017 at Sero’s Restaurant on 12 Mile Rd (between John R & I-75) in Madison Heights at 9:30 AM.

We plan to meet every Saturday at 9:30 AM at Sero’s. We have had 11 consecutive meetings that were well attended. Please plan to join us when you can.

### **XIII. Attendance + Funds Collected**

27 Members attended. There were (4) visitors.

The following funds were collected and deposited @ TCF Bank:

Membership Dues	\$ 90.00
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### **Upcoming Events for GMARC:**

<b>Next Membership Meeting</b>	<b>18-Apr-17 Tuesday 7:00 PM (Trinity Lutheran Church)</b>
<b>Cadillac Hamfest</b>	<b>6-May-17 Saturday 8:00 AM Cadillac, MI</b>
<b>Dayton HamVention</b>	<b>May 19-21, 2017 – Dayton, OH</b>
<b>IRA Hamfest</b>	<b>03-Jun-17 Saturday 8:00 AM – Hudsonville, MI</b>
<b>Chelsea ARC Swap Meet</b>	<b>04-Jun-17 Sunday 8:00 AM – Chelsea, MI</b>
<b>Monroe Hamfest</b>	<b>18-Jun-17 Sunday 8:00 AM – Monroe, MI</b>
<b>GMARC Lark-in-the-Park</b>	<b>??-Jun-17 4:00 PM – River Woods Park – Auburn Hills</b>
<b>GMARC Trunk Swap</b>	<b>22-Jul-17 Saturday 8:00 PM – Packard Proving Grounds</b>
<b>Harrison Hamfest</b>	<b>22-Jul-17 Saturday 8:00 AM – Harrison, MI</b>
<b>CMARC “Outdoor” Hamfest</b>	<b>29-Jul-17 Saturday 8:00 AM – Lansing, MI</b>
<b>Seaway Trunk Swap</b>	<b>13-Aug-17 Sunday 8:00 AM – Port Huron, MI</b>
<b>GMARC Lark-in-the-Park</b>	<b>15-Aug-17 Tuesday 4:00 PM – River Woods Park – Auburn Hills</b>
<b>Alpena Swap 2017</b>	<b>19-Aug-17 Saturday 8:00 AM – Alpena, MI</b>
<b>GRAHamfest</b>	<b>09-Sep-17 Saturday 8:00 AM – Wyoming, MI</b>
<b>Adrian Hamfest</b>	<b>17-Sep-17 Sunday 8:00 AM – Adrian, MI</b>
<b>GMARC Trunk Swap</b>	<b>23-Sep-17 Saturday 8:00 AM – Packard Proving Grounds</b>
<b>Great Lakes HamCon/Convention</b>	<b>Oct 7-8, 2017 – Michigan International Speedway <a href="http://www.glhamcon.org">www.glhamcon.org</a></b>

**XIV. Meeting Adjourned** at 8:53 PM.

Respectfully submitted,

Bobby Corr N8CY, Secretary  
**GM Amateur Radio Club**  
Cell: 248.346.2733

### Cash Flow - Year To Date

1/1/2017 through 4/5/2017

Category	1/1/2017- 4/5/2017
<b>INFLOWS</b>	
Dues	
Heritage	20.00
Regular	530.00
TOTAL Dues	550.00
Hamfest And Convention Funds	
GLARC HamCon 2017	0.00
TOTAL Hamfest And Convention Funds	0.00
Raffles	
50-50 Raffles	27.00
TOTAL Raffles	27.00
Repeater Fund	
DR-2X Repeater	702.50
TOTAL Repeater Fund	702.50
<b>TOTAL INFLOWS</b>	<b>1,279.50</b>
<b>OUTFLOWS</b>	
Business Operations	
501(c)(3) Fund	250.00
TOTAL Business Operations	250.00
Coffee Fund	-5.75
Member Recognition	64.50
Repeater Operations	150.00
<b>TOTAL OUTFLOWS</b>	<b>458.75</b>
<b>OVERALL TOTAL</b>	<b>820.75</b>

Balance Sheet  
12/20/2016 through 3/31/2017

Category	12/20/2016- 3/31/2017
<b>INCOME</b>	
Dues	
Heritage	20.00
Regular	560.00
TOTAL Dues	580.00
General Fund	1,495.53
Hamfest And Convention Funds	
GLARC HamCon 2017	0.00
TOTAL Hamfest And Convention Funds	0.00
Raffles	721.08
50-50 Raffles	27.00
TOTAL Raffles	748.08
Repeater Fund	1,035.90
DR-2X Repeater	1,102.50
TOTAL Repeater Fund	2,138.40
<b>TOTAL INCOME</b>	<b>4,962.01</b>
<b>EXPENSES</b>	
Business Operations	
501(c)(3) Fund	-150.00
New Member Mailpiece Fund	-10.96
TOTAL Business Operations	-160.96
Coffee Fund	-5.75
Member Recognition	64.50
Repeater Operations	150.00
<b>TOTAL EXPENSES</b>	<b>47.79</b>
<b>OVERALL TOTAL</b>	<b>4,914.22</b>

**GM Amateur Radio Club  
2017 Operating Budget**

Month	Bills	Amount
January	\$200 Donation to Trinity Lutheran Church \$150 to RenCen for 6 month of utilities	\$350.00
February	\$ 20 Annual Non-Profit Org State Report \$275 IRS 501(c)(3) filing, \$500 donation to GL HamCon (funded by NBSA + W8WAC)	\$295.00
March		
April		
May	\$1,500 Purchase Yaesu DR-2X Fusion Repeater (funded by DR-2X Fund \$1,082 + Raffle Fund \$721) - Capital Expenditure.	- 0 -
June	\$100 Lark-in-the-Park - June Meeting	\$100.00
July	\$150 to RenCen for 6 month of utilities	\$150.00
August	\$100 Lark-in-the-Park - August	\$100.00
September		
October	RenCen Antenna Liability Insurance expires on 10/21, cost will likely be \$298	\$298.00
November		
December	\$140 Volunteer Recognition Event	\$140.00
<b>Fixed Cost Total</b>	Requires (50) Members @ \$20/year to cover this amount = \$1,000 , + 50/50 Raffles = \$180, + Trunk Swaps = \$150	<b>\$1,433.00</b>
<b>Variable Cost Total</b>	<b>Note: Above amount <i>does not include</i> amounts for maintenance / repair of Repeater Infrastructure. Could be as high as \$500/year. There will also be misc. expense of "Blue Bucket", Office Supplies and/or Postage - \$125/year.</b>	\$625.00
<b>Grand Total</b>	Requires (81) Members @ \$20/year to cover this amount = \$1,650 , + 50/50 Raffles = \$180, + Trunk Swaps = \$150	<b>\$2,058.00</b>
	OR: Some combination of Members + Trunk Swaps and/or Raffles. Note: Misc donations; e.g. at other Clubs' Swaps go to the Repeater Fund.	

By: Bobby Corr N8CY, Secretary  
Date: 9-Apr-2017 - Version: 2.1



### Current Budget - Q1 2017

1/1/2017 through 3/31/2017 Using 2017 GMARC Budget

4/14/2017

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Category	1/1/2017 Actual	- Budget	3/31/2017 Difference
<b>INCOME</b>	<b>1,279.50</b>	<b>1,787.50</b>	<b>-508.00</b>
Dues	<b>550.00</b>	<b>1,025.00</b>	<b>-475.00</b>
Heritage	20.00	20.00	0.00
Regular	530.00	1,005.00	-475.00
Other Dues	0.00	0.00	0.00
General Fund	0.00	0.00	0.00
Hamfest And Convention Funds	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
GLARC HamCon 2017	0.00	0.00	0.00
Other Hamfest And Convention Funds	0.00	0.00	0.00
Raffles	<b>27.00</b>	<b>60.00</b>	<b>-33.00</b>
50-50 Raffles	27.00	60.00	-33.00
Other Raffles	0.00	0.00	0.00
Repeater Fund	<b>702.50</b>	<b>702.50</b>	<b>0.00</b>
DR-2X Repeater	702.50	702.50	0.00
Other Repeater Fund	0.00	0.00	0.00
<b>EXPENSES</b>	<b>394.25</b>	<b>496.00</b>	<b>101.75</b>
Business Operations	<b>250.00</b>	<b>292.00</b>	<b>42.00</b>
501(c)(3) Fund	250.00	250.00	0.00
New Member Mailpiece Fund	0.00	0.00	0.00
Other Business Operations	0.00	42.00	42.00
Coffee Fund	-5.75	0.00	5.75
Repeater Operations	150.00	204.00	54.00
<b>Net Difference:</b>	<b>885.25</b>	<b>1,291.50</b>	<b>-406.25</b>

# Agenda

To Be held @ **Trinity Lutheran Church**  
April 18, 2017 – 7:00 PM

- I. Call to Order and Pledge of Allegiance – President Tony W8OKX Presiding
- II. Introductions, Upgrades, and Visitors (5 minutes – 7:05)
- III. Presentation – Homebrew APRS I-Gate w/ Raspberry Pi – Marty KB8JIU (25 minutes)
- IV. Minutes of March Meeting – Bobby N8CY (Motion to Approve) – (5 minutes – 7:35)
- V. Treasurer's Report – Page 5+6 of Minutes – Don K7SDF (Motion to Approve) – (10 minutes)  
Motion to **close** the New Member Mailpiece Fund \$10.96, and the 501(c)(3) Fund \$125.00, and transfer the balances (\$135.96) to the General Fund.
- VI. Membership Report – Bobby N8CY (5 minutes – 7:50)  
Scott still needs additional Net Control Operators (NCOs) for the GMARC Monday Night InfoNet @ 8:00 PM. If you are willing to take one night a month, please let Scott know.
- VII. Inter-Club Liaison – Bobby N8CY (5 minutes – 7:55)
- |                         |   |
|-------------------------|---|
| Next Membership Meeting | 16-May-17 7:00 PM Tuesday (Trinity Lutheran Church)   |
| Cadillac Hamfest        | 6-May-17 Saturday 8:00 AM Cadillac, MI  |
| Dayton HamVention       | May 19-21, 2017 – Dayton, OH  |
| Monroe Hamfest          | 18-Jun-17 Sunday 8:00 AM Monroe, MI   |
| GMARC Lark-in-the-Park  | ??-Jun-17 4:00 PM – River Woods Park– Auburn Hills  |
| GMARC Trunk Swap        | 22-Jul-17 Saturday 8:00 PM – Packard Proving Grounds  |
| GMARC Lark-in-the-Park  | 18-Aug-17 Tuesday 4:00 PM – River Woods Park– Auburn Hills  |
| GMARC Trunk Swap        | 23-Sep-17 Saturday 8:00 PM – Packard Proving Grounds  |
| Great Lakes HamCon      | Oct 7-8, 2017 – Michigan International Speedway<br><a href="http://www.glhamcon.org">www.glhamcon.org</a> |
- VIII. Technical Committee Report – Ron WD8MNX (10 minutes – 8:05)  
Ron still needs additional Control Operators (COs) for **both** of our Repeaters. If you can monitor one (or both) of our Repeaters at certain times of the day, please let Ron know.
- IX. Break – (8:05 – 8:20 PM)  
50/50 Prize Raffle - Linda KD8SAI
- X. New Business (Draw for 50/50 Raffle **before** this Segment):
- Discuss formation of a Committee to evaluate the feasibility for GMARC to have a "Full Swap" in 2018 and beyond (5 minutes – 8:25) Magic Mike W8MJC + Fliers for Dayton
  - Discuss Location for Future Meetings: Trinity Lutheran vs. PPG (15 minutes – 8:40)
  - Discuss date for June **xx**, 2017 Lark-in-the-Park @ River Woods Park in Auburn Hills. 20-Jun-2107 (our normal meeting night) is **not** available. Possible dates are: June 13, 19, 21, or 27 – Membership vote for one. (5 minutes – 8:45) Bobby N8CY
  - Discuss By-Laws Change v1.75: Due to 501(c)(3) Tax Exempt Status (5 minutes – 8:50)
- XI. GMARC Embroidered Logo Gear (See Minutes Pg. 2) – Bobby N8CY (5 minutes – 8:55)
- Items previously ordered (2-Jackets + 1-hat) were ordered from Queensboro on 31-Mar-2017 and received 10-Apr-2017) – Congratulations Ken, Frank, and Allen!
  - See Minutes Pg. 4 for Available Items (Jacket, Shirt, Hat) – with Style Number, Available Colors / Sizes, and Prices. I expect to place another order with Queensboro in **May** – come prepared in May to order what you want for delivery at the June Lark-in-the Park.
- XII. Adjourn (Before 9:00 PM)