University of Michigan Amateur Radio Club: W8UM & W8AXZ

W8UM Student Officers; 2023 - 2024

President:	Maggie Li	KI5YMO
V-President:	Mick Gordinier	KE8VWA
Treasurer:	Kaleo Roberts	KE8TBP
Publicists:	Vacant	
Website:	Justin Hyun	

W8UM Trustee: Mark Travaglini, WD8DPA
W8AXZ Trustee: Michael Fluegemann, KE8AQW
Faculty Advisor: Prof. Amir Mortazawi, AC8YB

W8UM Meeting Dates

September 02, 2023	Student Open House
September 21, 2023	ROOM 1012 & ZOOM
October 26, 2023	ROOM 1012 & ZOOM
November 16, 2023	ROOM 1012 & ZOOM
December 21, 2023	**Winter Break – No Mtgs.**
January 18, 2024	ROOM 1012 & ZOOM
February 15, 2024	ROOM 1012 & ZOOM
March 21, 2024	ROOM 1012 & ZOOM
April – August	**Summer Break – No Mtgs.**

Officer Nominations: February Meeting
Club Officer Elections: March Meeting

W8UM Club Events & Dates

Northfest	Monday, September 2, 2023
Festifall	Tuesday, August 30, 2023
ECE Open House	Friday, September 29, 2023 (5-7:30 pm)
KB6NU 1-Day Class	Saturday, September 30, 2023
Collegiate QSO	Saturday, October 7-9, 2023
ARRL School Club	Week of October 16-20, 2023
ARRL CW Sweeps	November 4-6, 2023
ARRL Phone Sweeps	**November 18-20, 2023**
KB6NU 1-Day Class	Saturday, January TBD, 2024
NA QSO Party (CW)	January 13, 2024 2nd Full wknd in January
NA QSO Party (SSB)	January 19, 2023 3rd Full wknd in January
(North America Collegiate Championship)	
Winter Field Day	Last Weekend in January 27, 2024
ARRL School Club	Week of February 12-16, 2024
Mi QSO Party	April 15, 2023
ARRL Field Day	Saturday, June 28-29, 2024
One Helluva Ride	Saturday, July xx, 2024

W8UM Sunday Night Net (8 pm Ann Arbor time): 145.23 MHz, PL 100 Hz (-.600 MHz) or via EchoLink Node 301158 (W8UM-R)

Amateur Radio Club **Virtual & In-Person** Meeting Agenda for:
Thursday, November 16, 2023

Meeting Time: 6:30 pm
(Local Time / Eastern Time Zone)

Room 1012 EECS Bldg.

PIZZA will be provided!



Engineering & Medical Center from W8UM Tower

Meeting ZOOM Link: https://umich.zoom.us/j/4780563282

Meeting ID: 922 8076 161

Facebook: https://facebook.com/groups/329930310446470
Website: https://umarc.eecs.umich.edu
Slack: amateurradioclubw8um.slack.com
QRZ.com: W8UM
QRZ.com: W8AXZ
e-mail: W8UMBoard@umich.edu



W8AWT operating; 10/2023

University of Michigan Amateur Radio Club: W8UM & W8AXZ

Club Announcements & Planned Activities: Maggie Li & Mick Gordinier.

Guest Speaker: Tim Duffy, K3LR. CEO DX Engineering

Bio: Tim is the Chief Executive Officer at DX Engineering. Licensed in 1972, Tim is very active on the HF bands. K3LR enjoys hosting multi multi DX radio contest events. Tim likes to help bring new people into the hobby by mentoring them in the fun of amateur radio. Tim is president of his local ham club, the Mercer County Amateur Radio Club. He is active in RACES, ACS and ARES. Tim is a member of the CQ Contest Hall of Fame and was on Team USA for the World Radio Team Championship (WRTC) five times. Tim is the founder and chairman of Contest University (CTU). He is chairman of the World Wide Radio Operators Foundation (WWROF). Tim is a graduate of the Pennsylvania State University.

Tim is the recipient of the 2015 Amateur of the Year Award presented by the Dayton Hamvention® Awards Committee and the 2016 YASME Excellence Award.

Topic: Contesting

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1. **President's Welcome**
2. Treasurer's Report
3. Station Manager's Report

Treasurer's Report:

Balance (10/05/2023):	$	10606.72
Revenues (equip. sales):	$	0.00
Donations (Item 5a):	$	665 .00
Less Expenses: (Item 5b):	$	337.37
Balance (11/05/2023):	$	10937.95

W8UM Repeaters (Weiser Hall)
145.230 MHz w/ EchoLink
(NEW) *29.640 RX, 29.540 TX (-) Tone 114.8*
(NEW) *Linked to: 444.975 RX, 449.975 TX (+) Tone 107.2*
444.075 RX, 449.075 TX (+) Tone 82.5

Station Manager's Report:

EECS Location:
Radio's: **Yaesu FTDX 5000 / Flex 6400**
IC-746 / IC-910 / APRS / FT-8800 / TS-590
Main Tower: SteppIR (6-40M), 2M Yagi, 70cm Yagi, Discone
Wires: 80M, Barker & Williamson (6-160M)
Verticals: 10-20M, 10-40M, 2M (APRS), 10M
Tower Cam: operational
Amplifiers: Ameritron AL-82 / ACOM 2000A / SB-220
Satellite Tower: RH Circular Polarized Yagi; 2M & 70 cm
Trailer Tower: 35' Tower w/ 3-L SteppIR, Controller & Rotor
Storage: 40' tilt-over Tower / 3-Element Mosley 10-20M
HAB Program: 137 MHz / 404 MHZ Antenna Array
UM Biological Station: (Pellston, MI.) **Remote Site in-progress**

4. Prior Business / News:
   a. ARRL Test Sessions; 2nd Saturday of each month. Contact ARROW Comm.,
   b. Open Shack Nights / SWL Open House: anyone interest in leading / organizing / scheduling?
   c. Peach Mountain Observatory Restoration: update / interest list created
   d. ~~Any interest in taking the lead on a MOTUS Research Group (UHF Bird Tracking Program)?~~ Operational 10/2023
   e. **WSPR Reception**: 10-80M. View weak signal band propagation into Ann Arbor**.** **http://wspr.rocks/?action=fetch&balloons=hide&rxCall=&txCall=W8UM&count=500&mode=All&band=all&hours=4&unique=false&advanced=**
   f. W1AW / ARRL Headquarters: if visiting Connecticut and wish to operate from W1AW, please contact Bob, NQ1R@arrl.net, to arrange.

5. W8UM / W8AXZ Contributions / Expenses / Donations:
   a. Generous Contributions / Financial Support Received:
      1. Jason DeBord
      2. Ul Balis
      3. Doug Ensor

   b. Club Purchases / Expenses: **$ 333.77 11/06/2023**
      1. Pizza / Beverages $ 86.90

2. Pizza / Beverages $ 26.97
3. R&L Electronics $ 219.90
4. Festifall / WinterFest Registration $ --

c. Equipment Donors:
   1. Nancy Savat

d. Donated Equipment / Radios Received:
   1. Heath Shortwave 64 Receiver
   2. Knight Tube Checker
   3. ICOM 25A 2M Mobile

5. Support W8UM / W8AXZ Activities: Food, Radio Repairs, Upgrades, Purchases, Tower & Antenna Maintenance
Financial Support / Donations Accepted from all (non-students) individuals with an amateur radio call sign.
Students are Free.
Credit Cards & Payroll Deduction accepted via the W8UM website below:
https://umarc.eecs.umich.edu/index.php/support-your-favorite-u-m-student-club/donate-online/

6. Covid-19: Student Organizations Rules for In-Person Events / W8UM Shack. **EFF 05/2022:** The following safety measures apply for all in-person gatherings, activities, events, programs, practices, rehearsals, competitions, and/or meetings hosted by recognized student organizations (RSOs).

- **Indoor campus events must adhere to UMich Public Safety Rules.**
- **All Masking & Social distancing have been eliminated.**
- ~~**Must download & complete the ResponsiBLUE Screening App and obtain a "Passed" for entry on campus.**~~
- **Must be Vaccinated & Boosted**

8. Scholarships available to UMich Students:

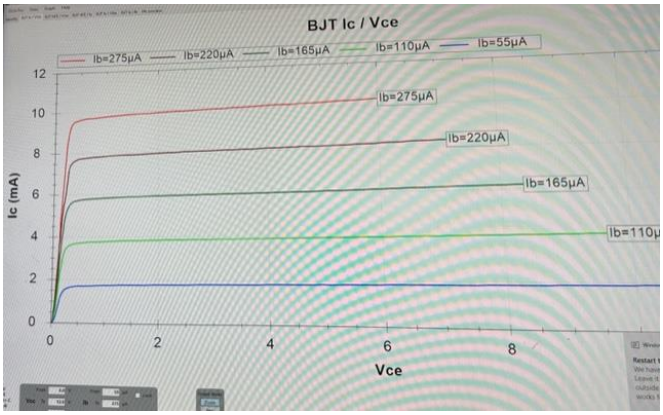
a. ARRL Scholarship: Link: **www.arrl.org/scholarship-application**
b. Foundation for Amateur Radio (FAR): Link: **https://www.farweb.org**
c. Amateur Radio Digital Communications (ARDC): Link: **https://www/ampr.org/giving/**
d. Ford Motor Company Heritage Scholarship**:** Link: **https://www.fhnus.org/heritage-scholarship-michigan**
e. **NATIVE Forward Scholars Fund** (NEW; 11/2023) Link: https://www.nativeforward.org

9. W8UM Radio Repair & Restoration Group:

a. **Current Projects**;
   i. Twoer 2M SSB transceiver; 145 MHz crystal (Radio belonging to Vic Poor; WinLink)
   ii. Calibrate AA-600 Analyzers
   iii. Zenith AM/FM/Phone Console, Transistor Testing / Curve

Original (defective) and replacement transistor curve traces included below. The defect is characteristic of junction breakdown at quiescent base drive current levels. As the transistor's VCE bias was well above the observed breakdown threshold at low Ic drive, it is now obvious why the channel was in a continuous state of exhibiting noise. The diagonal lines are an artifact of the way the curve tracer works. When breakdown occurs, the transistor spontaneously shifts to a different region of the Ic/Vce map, where base current jumps significantly owning to junction breakdown, and in so doing, also changing junction resistance, which in turn causes Vce coming out of the tracer to drop (given that the tracer makes use of a constant current source). The zigzag patterns are a telltale sign that the junction breakdown is unstable and noisy. A test with an ohm meter probably would have passed. 90% or more, only the curve tracer would reveal this failure.

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"Good" Transistor Curve Trace



"Defective" Transistor Curve Trace

iv. Repaired 10M SPT-500 Vertical antenna; (completed 10/2023). Cold solder SO-239 center conductor.

v. Replace 220 MHz coax (11/2023)





b. Please contact W8UM.Radio.Restoration.Group@umich.edu for "exact" dates / times of future restoration meetings and projects.

c. W8UM has both a Hickok & EICO tube testers available for use & over 1200 tubes, assorted radio knobs & capacitors available to Members.

13. **W8UM Repeaters: On-the-Air!**

29.640 RX, 29.540 TX, (-) Offset, Tone 114.8

Linked to: 444.975 RX, 449.975 TX, (+) Offset, Tone 107.2





14. **NWS Weather Balloon Tracking, from W8UM: Visit: http://habh1.eecs.umich.edu:5000**

15. **Available Shack Items List:** Contact W8UM for info.

a. Regency UHF Repeater
b. **HTDX10- RadioShack 10M transceiver**
c. Data transfer switch
d. Radio Shack 3A/13.8 vdc pwr supply (new)
e. Fluke digital multimeter
f. VANCU Coax switch
g. Yaesu FT 23R 2M HT
h. LDG 200w RU 4:1 UNUN
i. Radio Shack scanner antenna
j. Desk Lamp
k. TenTec Model 234 Speech Processor
l. **TenTec Omni VI HF Transceiver w/ mic**
m. **Mosley TA-33 Yagi; 10-20M**
n. **Mirage 2M amplifier**

Heathkit TC-3 Tube Checker
Heathkit HM-102 SWR/PWR Meter
Heathkit SB-600 Pwr Supply / Spkr
Heathkit SB-634 Station console
Heathkit SB-102 Transceiver
Heathkit SB-614 Station Monitor
Heathkit HD-19 Phone Patch
Heathkit SB-630 Station Console
Heathkit SB-610 Station Monitor
HeathKit SB-200 amp
Kenwood SM-220 Station Monitor
Heath 64 Shortwave REceiver
Vert antenna Tilt-Over bracket (x2)
Tilt-Over vert mast clamp

o. Vintage knobs, tubes
p. **Insulators; plastic and ceramic**
q. Motorola speaker
r. Copper tube
s. Discone (some broken radials)

Copper ground rod (approx. 4')
ICOM 2M 25A
Knight Tube Tester

16. **Amateur Radio Digital Communications Grant Update (ARDC)**; Grant is Completed (11/04/2023)
    a Repairs to the 10M Cross-Band Repeater;
        i. Repairs to the 220 MHZ cross-link radios (Completed; 9/2023)
        ii. Receive Site installation 10M/220 MHz (Completed; 10/2023)
        iii. Transmit Site Work Continues (10/2023)
        iv. Weiser Hall Transmit Repeater Installation (10/2023)
        v. Repeater Operational, undergoing additional testing (11/04/2023)

17. W8U**M Shack Access**: If interested in obtaining a "Shack Access Code", that provides you with unlimited room access, please contact W8UM at W8UMBoard@umich.edu
    Shack Orientation / Access Key November, 2023):
        1. None

18. W8UM Sunday Night Net; Control Ops:

10/29/2023 Dan Romanchik, KB6NU
11/05/2023 Pat Seitzer, WA4DSR
11/12/2023 Pat Seitzer, WA4DSR

19. **Members / Alumni:** If you plan to visit Ann Arbor and would like to tour or operate from W8UM please contact W8UM in advance at W8UMBoard@umich.edu to arrange.

20. **UMich ARC Sunday Night Net 8pm local time**: if outside of Ann Arbor, sign-on to EchoLink using the Android, i-Phone or computer apps. Net is open to ALL licensed individuals.



Download the FREE EchoLink app to connect to the W8UM repeater (145.230 MHz).

1. Call-sign verification may take minutes to several days
2. Search for W8UM and save to Favorites
3. Press Connect
4. Tap Transmit, on your iphone/android, to talk & Tap the screen to stop TX
5. Disconnect from the W8UM Repeater by tapping END
6. **Follow the same process to connect to repeaters throughout the world.**

iPhone screenshot

21. Attendance (October, 2023): Attendance: 34 ZOOM: 6 In-Person: 28

22. Open Discussions / Comments / Audience Announcements:

23. Monthly Presentation: Described Above.

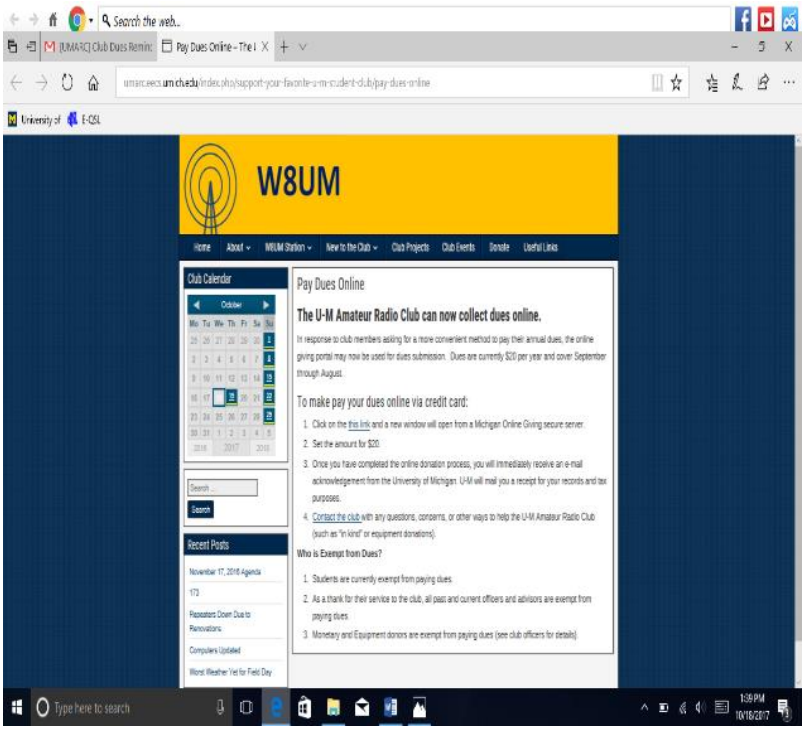
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W8UM President or Designee

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To make a monetary donation to support W8UM, please use the link below.

https://umarc.eecs.umich.edu/index.php/support-your-favorite-u-m-student-club/donate-online/



W8UM Meeting Location: Room 1012 **First Floor Classroom**

Electrical Engineering & Computer Science Building

Address: 1301 Beal Ave.

ZIP: 48109



Engineering Campus Visitor & Employee Parking Lots **Parking Violations are $65; eff. 06/2023**

Hayward Street: Lot NC 20

FREE to Visitors after 5 pm weekdays & weekends or anytime with a UM Parking Pass.

FREE to Retiree's after 3:30 pm with Retiree Parking Pass

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*** **Barrier Free Access** thru the DOW Bldg into the 3rd Floor EECS Bldg.

Hayward Street: Lot NC 48

FREE to Visitors after 5 pm weekdays & weekends or anytime with a UM Parking Pass.
VISITOR parking is $1.80 / hour (coin or credit card) before 5 pm
FREE to Retiree's after 3:30 pm with Retiree Parking Pass
*** NOT Barrier Free Access to EECS

Murfin Street / Walgreen Drama Center: Lot NC 27

FREE to Visitors after 8 pm weekdays & Sunday only or anytime with a UM Parking
VISITOR parking is $1.80 / hour (coin or credit card) before 8 pm
FREE to Alumni / Retiree's after 3:30 pm with Retiree Parking Pass
*** **Barrier Free Access** thru the courtyard to the EECS Bldg.

Beal Street: Lot NC 60 **GATED Parking Lot**

FREE to Visitors after 5 pm weekdays & weekends or anytime with UM Parking Pass
FREE to Alumni / Retiree's after 3:30 pm with Retiree Parking Pass
*** **Barrier Free Access** along the East Side of EECS Bldg.

University of Michigan Amateur Radio Club: W8UM & W8AXZ

Date: _____

NAME	Unique or e-mail	Call Sign (if any)

University of Michigan Amateur Radio Club: W8UM & W8AXZ

Name	Unique or e-mail	Call Sign (if