

W0BLK
BLACK HILLS AMATEUR RADIO CLUB, INC

3288 Sandstone Lane
Rapid City, SD 57701-5388

Call to Order: The BHARC meeting was called to order at 7:00 pm on 17 Apr 2026 by Treasurer Chris Jaques KD0RAS. The meeting was held in the EE/Physics Building at the South Dakota School of Mines and Technology, room 251A.

The following attended the meeting in-person:

Andy Pattantyus KF0ARA
Gary Peterson K0CX
Dave Minnick N9FI
Greg Maxwell NT4TN
Jeff Halgerson K0HF
Don Jarvinen K0DAJ
Steve Maro K2WRM
Chris Jaques KD0RAS
Larry Brock N0LRB
Larry Broomfield AC0WT
Delbert Long KD0AYN
Marko Kocanda WV9M
Jim Larkin KF0TSF
Mike Key K0MDK
John Murphy AJ0GM
Mike Schaff KD0ZIP
Mike Kempin N0USY
Jan Schmidt KF0MOX
Steve Naeve N0NKS
Bob Olsen WA0FPR

Introductions: Each attendee introduces themselves.

Secretary's Report:

Sent out minutes for Mar 2026. Need approval.

Larry Broomfield AC0WT moved to accept the Mar 2026 club meeting minutes as amended, and Mike Key K0MDK 2nds. Vote: none opposed, motion approved

Treasurer's Report: Chris Jaques KD0RAS provided the treasurer's report by email:

Current Balances at Black Hills Federal Credit Union:

Regular Share: \$5.20
High yield Savings: \$4,099.41
Checking: \$2,054.78
6 Month CD: \$8,234.98 matures in May 2026 (to be renewed for 12 months)
12 month CD: \$8,234.99 matures in November 2026
Paypal: \$380.78

Disbursements cleared since last meeting:**Dues/Donations/Receipts:****Pending Disbursements:**

March Meeting Room \$25
April Meeting Room \$25
Feb. Clubhouse Electric \$80.64
Mar Clubhouse Electric \$86.35

Gary Peterson K0CX moved to approve the Treasurer's report, and Larry Broomfield AC0WT seconded, Vote: none opposed, motion approved

Committee Reports:**Engineering/Technical Committee:** Mike Key K0MDK

Point to point devices failed, older devices
Propose new point-to-point devices, Ubiquiti U7, about \$400
Echo-link is down

ARES Committee: Ryan Lindblom KE0LXT (absent)

No report.

Public Relations and Recruitment Committee: Don Kendall N1NOX (absent)

No report

Activities Committee: Larry Broomfield AC0WT and Delbert Long KD0AYN report

Delbert reports.

QSO Party - Poor attendance, non-existent, Bill, Terry, Larry, Delbert. Disappointment

Clubhouse cleanup - April 18th

Club is not working as a club

Larry - the club has to decide what the club members want to do

Chris - when does the clubhouse cleanup start?

Delbert - who will make the decisions?

May activities - Website and groups.io

Black Hills 100 - June last weekend

Mystic will be July 12th

Heart of the Hills July 18th

Larry - would hate to see the club dead in 8 years. There are 100s of HAM operators in the area

Larry - each person should ask "What can I do to advance the club?"

Chris - suggests a discussion on groups.io

Since the committee reports brought no action, there was no call for approvals.

Summary of Community Service Activities

No community service activities since the March 2026 club meeting

Summary of Education Activities

The program at the BHARC club meeting each month is education.

Old Business:

New class starting in September. Approved for book purchase.

Larry Broomfield AC0Wt reports that Instructor registration with ARRL provides a 25% discount

New Business:

Wireless Link, \$499 for the pair, preconfigured and pre-linked, including shipping

Andy Pattantyus KF0ARA moves to approve \$600 for the equipment, Jan Schmidt KF0MOX

2nds. Vote: none opposed, motion approved

Chris Jaques KD0RAS suggests updating the security cameras.

John Murphy AJ0GM asks about the relationship with SDSMT

Chris Jaques KD0RAS summarizes:. Annual lease, electric bill (\$80-\$90/month), monthly room rental (\$25/mo0

New Member Applications:

Jon Lambert KE9CAW is interested in membership. Vote on him next time.

Announcements:

None

Adjourn:

Gary Peterson K0CX moved to adjourn the meeting and Jeff Halgerson K0HF 2nds.

Vote: none opposed, motion approved

The meeting was adjourned at 7:39 pm.

Andy Pattantyus, KF0ARA

BHARC, President and Acting Secretary

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Program - Marko Kocanda WV9M - Antenna Modeling and Simulation

Last talk 6 or 7 years ago.

Fascinated with antennas and propagation.

EZNEC Pro/2+ v7.0

Finite Element Analysis

40m dipole

Metric Tape Measure

Insulation adds capacitance

Freeware is max 11 segments. Paid version can handle more segments.

3mm - 14 AWG

Freespace approximation.

0.1 MHz step size

1.5 SWR with 50 ohm feed, 1.1 SWR with 75 ohm feed,

Dipole in free space is 78 ohms

Next, 2m vertical, $\frac{1}{4}$ wave groundplane

6mm diameter wire

Next, 15m cubical quad, radiator and reflector. 1 wavelength around the perimeter

Using 12 gage wire, for structural reasons

Have not modeled an inverted Vee

Log periodic for 15m

6m vertical - 1" copper water pipe with SO-239 at the base

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