

AARC Meeting Minutes March 8, 2022

Zoom Meeting started by Ed Berkowitz, Acting President

Don Eason not here due to illness, treasurer's report to be sent later.

New members voted into club tonight:

Laura and Michael Parsons - Laura, KA0RYB, Extra; Michael,- KO4RYA, Extra
Matt Jablonski, KO4YDT, Technician
Peri Forister, W5PRY, Technician

Repeater report – Dave Damon:

730 repeater had performance issues, replaced pre-amp and performing OK. Bill Pond and Dave installed pre-selector on 895 repeater.

Events – Dave Damon:

Next month bike ride event.

Equipment sales – Jim Owen:

He has lots of smaller stuff like antennas including new G5RV, 100 ft RG8, mobile antennas, power supplies and a lot of miscellaneous equipment.

Ed reported that he and Michael Rein sorted through Bill Arnold's(SK) equipment. His widow asked that equipment be given to new hams. Ed will discuss with other Board members about criteria for deciding who gets equipment.

Ed said quarterly board meetings required per bylaws so next one is scheduled for Saturday, March 19 via Zoom. Officers and board members attend and all club members are welcome.

Swapfest will be scheduled for March 19 in AM at Dowden Towe park, weather permitting.

MNIN report – Larry Eicher:

Small increase in attendance. MNIN passes on information about public events and contests.

Field Day report – Bob Romanko:

Will have real in-person FD this June. Suggested location is Earlysville Fire Station. Great location with in-door restrooms. However, very little foot traffic from general public. Alternate location is open field at Stonefield shopping center. Great foot traffic but maybe problem with how to setup dipole antennas. Also, publicly available restrooms maybe problem. Paul had contact with manager at Stonefields but that person is gone and he is trying to reach new manager.

Some discussion about JOTA (Scouts Jamboree on Air).

Bob said we do have reservations for last weekend in June at Earlysville.

He said he will send email to club members to get a poll for which location they prefer.

Paul said last time he checked noise levels at Stonefield are low. KN4LYF asked about interference with Northrup-Grumman next door but others felt this would not be a problem.

KN4LYF also suggested a split FD between the two sites but FD rules prohibit this. Most likely, our FD will be in Earlysville and we can try Stonefield for the October Scouting Jamboree on the Air.

Reminder that FD is June 24-26 this year.

Goal is to make decision on site by 4/2. We will purchase our food this year rather than ask merchants for donations.

No other new/old business.

Presentation by Ed Berkowitz on Building First HF Station. - see attached briefing.

=====
John Porter brought up doing Saturday mornings in person at Panera. Possibly April but depends on COVID prevalence.

Meeting adjourned by Ed at 8:20 PM.


Respectfully submitted,

Stephen Kramer KN4CJI
Secretary

=====
AARC Meeting Attendee List
3/8/2022

28 in attendance via Zoom.

John Porter	KK4JP
Ed Berkowitz	N3US
James Owen	K4CGY
Steve Kramer	KN4CJI
Bob Romanko	AK4BR
Ben Casto	NX4S
Dave Damon	K4DND
Dave Beebe	KN4UEK
Ian Callahan	KN4TBG
Jim Wilson	K4BAV
Joe DiVincentis	KO8V
Warren Yursik	KN4LYF
Larry Eicher	K4JZQ
Mike McPherson	KQ9P
Paul McKee	AK4OH
Sara Townsley	KO4UPF
Tim Freeze	KO4ELL
Dennis Terribile	WR4I
Wynn Solomon	AI4MV
Patrick Morrissey	KO4VLM
Roy Chilson	W1REC
Brian O'Rourke	K4UL
Michael Ellington	KN4BFB
Rich Freeman	KI4QKV
Barbara Freeman	KN4LAH
Joe Greenberg	KJ4PE
Dorsey Thacker	WD4LT



BUILDING YOUR FIRST HF STATION

By Ed Berkowitz, N3US
March 8, 2022

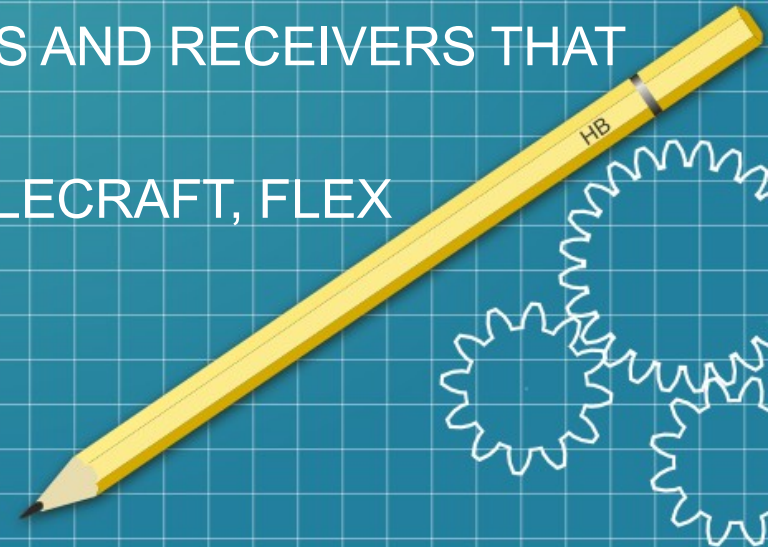


ALL STATIONS REQUIRE

- HF TRANSCEIVER
- POWER SUPPLY
- ANTENNA
- PROPER STATION GROUND

HF TRANSCEIVER

- COST VARIES FROM \$200 USED TO OVER \$5000 FOR NEW LATEST & GREATEST. MOST ARE 100 WATTS OUTPUT POWER; 160 – 10 METERS
- WE USED TO HAVE SEPARATE TRANSMITTERS AND RECEIVERS THAT WERE COSTLY IN TODAY'S DOLLARS
- MAJOR BRANDS: ICOM, YAESU, KENWOOD, ELECRAFT, FLEX
- EXAMPLES: YAESU FT-450D USED PRICE 500
- ICOM IC-7300 NEW PRICE \$1100







ICOM

HF/50MHz TRANSCEIVER IC-7300

LSB

FIL2

VFO A 1

13:33

TX

7.073.00

S/Po

1 + 5 + 9

7.030

7.200

7.04

7.06

7.08

7.10

7.12

7.14

7.16

7.18

ATT OFF

HOLD

AUDIO SCOPE

0

1.0

2.0

3.0

4.0kHz

LEVEL: -30dB

300ms/Div

ATT

HOLD

LEVEL

TIME

EXPD/SET

MENU

FUNCTION

M.SCOPE

QUICK

EXIT

SPEECH

TWIN PBT CLR

MULTI

RIT

TX

CLEAR

SPLIT

A/B

V/M

XFC

MPAD

TX/RX

AUTO TUNE

POWER

TRANSMIT

TUNER

VOX/BK-IN

PHONES

MIC

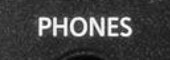
PAMPATT

NOTCH

NB

NR

AF RF/SQ

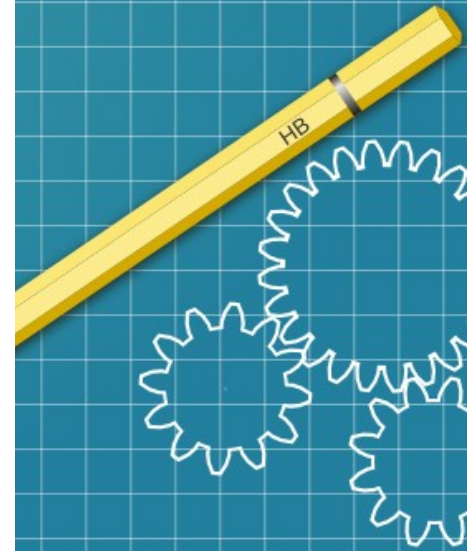


POWER SUPPLIES

- PURPOSE IS TO CONVERT 110 VAC WALL VOLTAGE TO 13.8 VDC REQUIRED FOR MOST HF TRANSCEIVERS. NEED ABOUT 25 AMPS
- TWO TYPES:
 - LINEAR: CLASSIC DESIGN, HEAVY, EASY TO REPAIR
 - SWITCHING: LIGHTER, LESS EXPENSIVE, HARD TO REPAIR; REQUIRE INTERNAL FILTERING TO MINIMIZE EMITTING RF NOISE
 - TYPICAL NEW COST: LINEAR \$250; SWITCHING \$130
 - BRANDS INCLUDE ASTRON, SAMLEX, ALINCO, MFJ, OTHERS
 - MY OWN PREFERENCE IS ASTRON LINEAR POWER SUPPLIES, OFTEN AVAILABLE USED
 - POWER SUPPLIES PLACED ON FLOOR SHOULD NOT LIE DIRECTLY ON CARPET, USE BOARD UNDERNEATH TO ENSURE AIR CIRCULATION







ANTENNAS

- ANTENNA IS MOST IMPORTANT PART OF STATION
- BASIC ANTENNA TYPES:
 - WIRE ANTENNA AS HIGH AS POSSIBLE, ENDS AND CENTER OFTEN SUPPORTED BY ROPES ATTACHED TO TREES. EXAMPLES: OCF DIPOLE AND FAN DIPOLE; COST WITH COAX ABOUT \$100
 - VERTICAL- GROUND MOUNTED, GREAT FOR DX BUT REQUIRE MANY GROUND RADIALS. \$350. ELEVATED VERTICAL JUST A FEW RADIALS
 - 60 FOOT TOWER WITH YAGI GAIN ANTENNA – SEVERAL THOUSAND INSTALLED
 - MY RECOMMENDATION FOR NEW HF OPERATOR: OFF CENTER FED (OCF) DIPOLE – COVERS MANY HF BANDS; CAN BUILD OR BUY



OTHER STATION CONSIDERATIONS

- WHERE TO LOCATE: IN BASEMENT OR IN A HIGHER FLOOR?
- ALL STATIONS REQUIRE SOUND BONDING AND GROUNDING. HARD TO HAVE A SHORT GROUND ROD CONNECTION IF STATION IS IN AN UPPER FLOOR.
- MY RECOMMENDATION: USE BASEMENT AND TIE YOUR EQUIPMENT GROUNDS, POWER PANEL GROUND AND STATION GROUND RODS TOGETHER.

MY STATION INTERNAL GROUND BUS

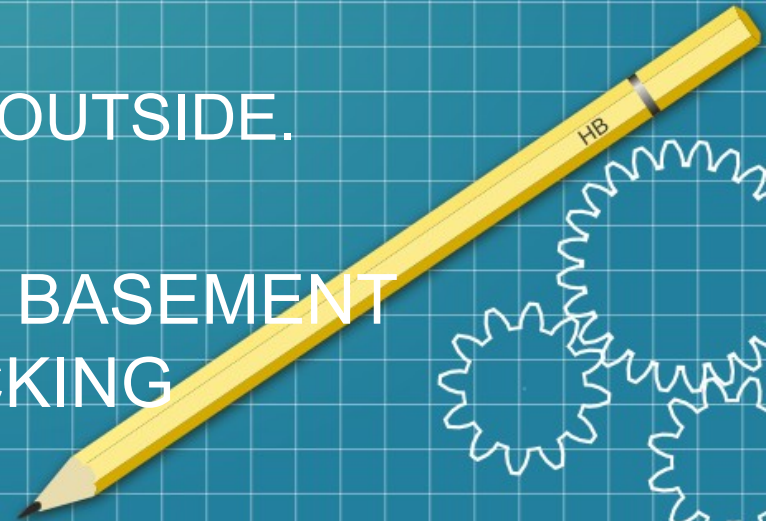


MOUNTED 48" COPPER PIPE ($\frac{1}{2}$ ") BACK OF OPERATING TABLE

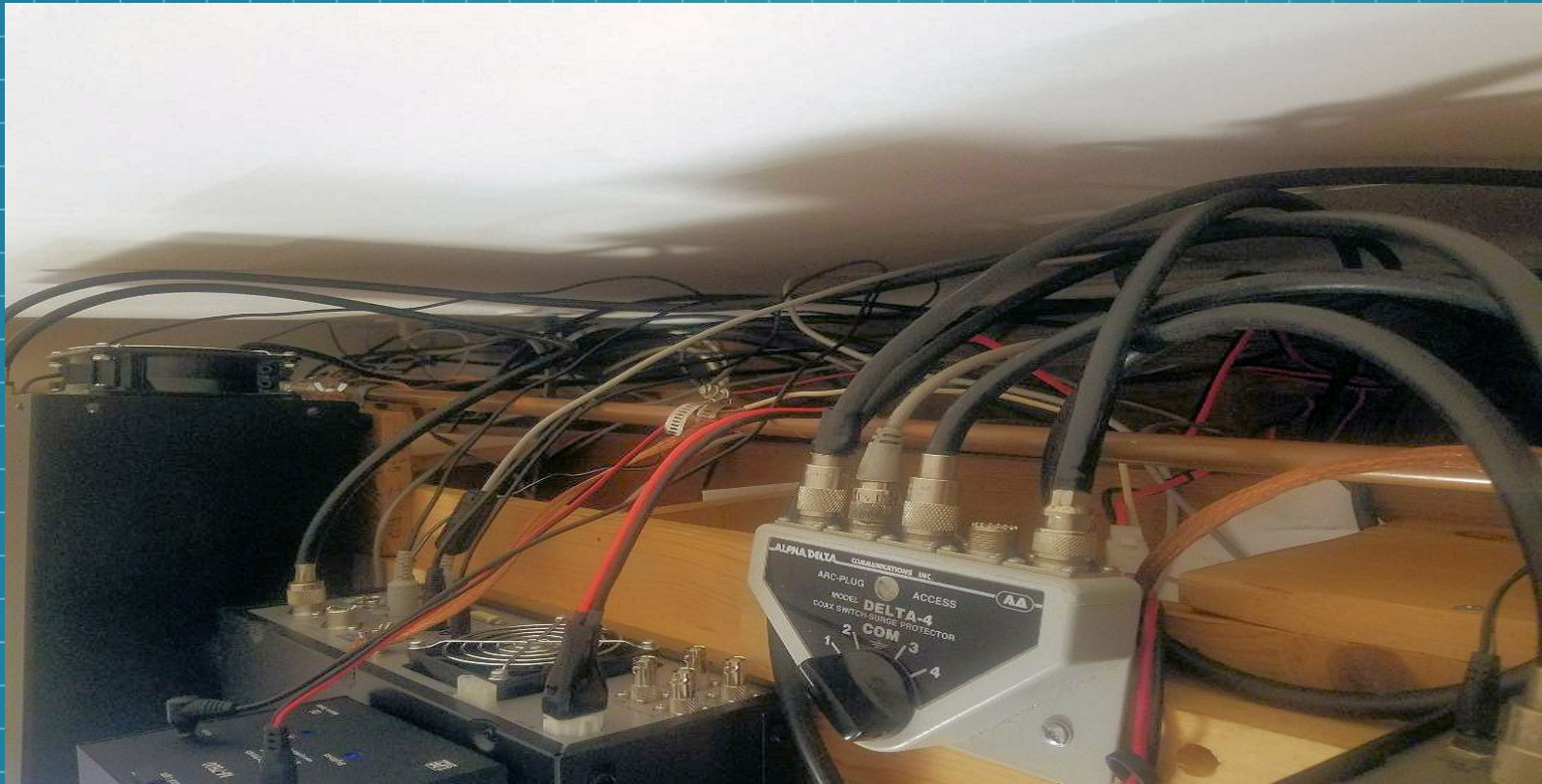
CONNECT EACH EQUIPMENT GROUND TERMINALS TO THIS GROUND BUS BAR

USE 6 AWG WIRE TO GROUND ROD OUTSIDE.

USE 8 FOOT GRD ROD 18" FROM BASEMENT WALL -REDUCES CONCRETE WICKING MOISTURE AROUND GND ROD



MY STATION INTERNAL GROUNDING BUS



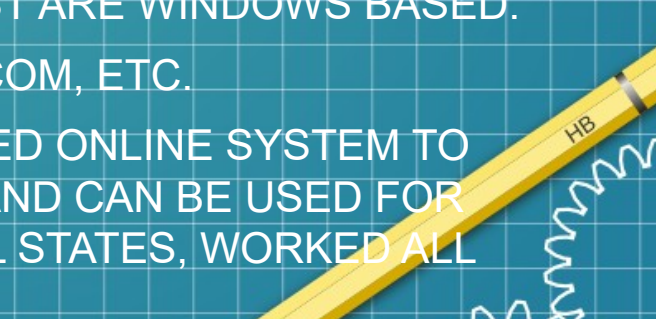
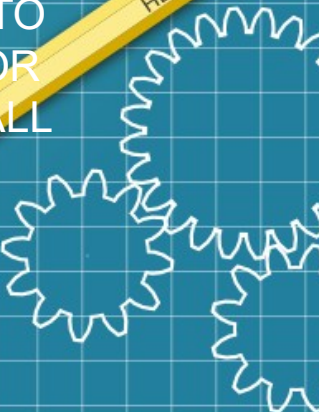


ADDITIONAL ACCESSORIES

- INCLUDES WATT AND SWR METERS, ANTENNA TUNERS THAT HAVE EXTENDED TUNING RANGES FROM THOSE BUILT INTO MODERN TRANSCEIVERS, ANTENNA SWITCHES, ETC.
- NOTE THAT MOST TRANSCEIVERS HAVE BUILT IN SWR AND WATT METERS.

OTHER CONSIDERATIONS

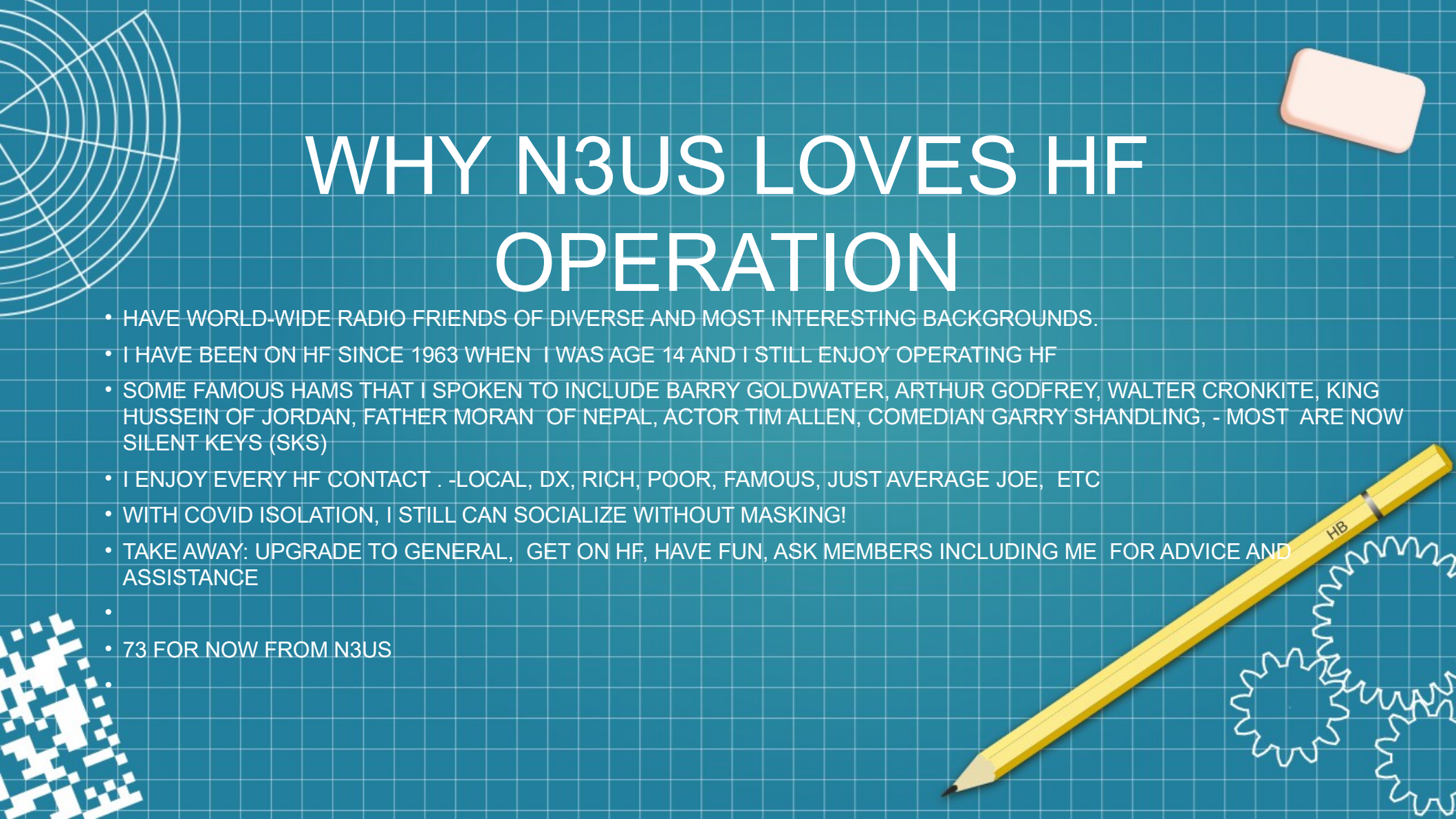


- LOGGING SOFTWARE – THERE ARE MANY PROGRAMS AVAILABLE FOR EITHER FREE OR LOW COST. N3FJP SOFTWARE SUITE (\$60) SEEMS TO BE AARC DEFACTO PROGRAM!
 - YOU CAN TRY ANY PROGRAM AND EASILY EXPORT DATA INTO ANOTHER SOFTWARE LOGGING PROGRAM.
 - OTHERS INCLUDE HAM RADIO DELUXE (\$100), XMLOG (FREE), DXLAB (FREE), ETC. A FEW ARE AVAILABLE FOR APPLE AND LINUX OS BUT MOST ARE WINDOWS BASED.
 - ALL LOGGING PROGRAMS CAN UPLOAD TO LOTW, QRZ.COM, ETC.
 - LOGBOOK OF THE WORLD (LOTW) IS ARRL ADMINISTERED ONLINE SYSTEM TO ELECTRONICALLY EXCHANGE CONFIRMATIONS (QSLs) AND CAN BE USED FOR APPLYING FOR VARIOUS AWARDS SUCH AS WORKED ALL STATES, WORKED ALL CONTINENTS, DXCC, ETC.
- 
- 



WHAT MODES WILL YOU OPERATE

- SINGLE SIDEBAND – SSB – VOICE
- CW – MORSE CODE, GAINING POPULARITY DUE TO IT BEING CHALLENGING AND FUN
- DIGITAL MODES SUCH AS FT8 AND FT4 USING FREE WSJT-X SOFTWARE. CAN WORK STATIONS AROUND THE WORLD WITH VERY LOW SIGNAL TO NOISE RATIO, EVEN WHEN BANDS SEEM TOTALLY DEAD TO SSB AND CW



WHY N3US LOVES HF OPERATION

- HAVE WORLD-WIDE RADIO FRIENDS OF DIVERSE AND MOST INTERESTING BACKGROUNDS.
- I HAVE BEEN ON HF SINCE 1963 WHEN I WAS AGE 14 AND I STILL ENJOY OPERATING HF
- SOME FAMOUS HAMS THAT I SPOKEN TO INCLUDE BARRY GOLDWATER, ARTHUR GODFREY, WALTER CRONKITE, KING HUSSEIN OF JORDAN, FATHER MORAN OF NEPAL, ACTOR TIM ALLEN, COMEDIAN GARRY SHANDLING, - MOST ARE NOW SILENT KEYS (SKS)
- I ENJOY EVERY HF CONTACT . -LOCAL, DX, RICH, POOR, FAMOUS, JUST AVERAGE JOE, ETC
- WITH COVID ISOLATION, I STILL CAN SOCIALIZE WITHOUT MASKING!
- TAKE AWAY: UPGRADE TO GENERAL, GET ON HF, HAVE FUN, ASK MEMBERS INCLUDING ME FOR ADVICE AND ASSISTANCE
-
- 73 FOR NOW FROM N3US