

THE KLARION

Quarterly Newsletter of the Keuka Lake Amateur Radio Association

The Fiske Field Day 2020

by KLARA members Joel Fiske (KC2VAW) and Donna Fiske (KD2CZY)

2020 has been a very different year, from many different perspectives. Field Day 2020 has also been very different.

Donna and I made the decision to operate 2 different stations from our home location. Both of us have health risks which make being in large groups a poor idea.

Donna, who is licensed as a technician, ran a VHF effort; with antennas for 2 meters (both FM and SSB) and 6 meters (SSB). Unfortunately, her traffic was non-existent. We found no Sporadic E openings for her to work. We did “park” her transceiver on a known beacon frequency, so we should have known if we got a 6 meter opening. Unfortunately, no luck. I could have created some ground wave traffic for her by going down the road with a mobile rig (yes, my mobile rig is capable of this), but when we discussed this, we agreed this was a bit “hokey” and did not do it.

On the HF side, I worked 20, 40, and 80 meters in a pretty casual manner. We took fairly longish breaks for meals, and I did not work the “night shift”. I had intended to work overnight, but fell asleep in the chair at about 11:00 PM. When I woke up, around 11:30, I decided a full nights sleep was in order!

I had two antennas available... our 43’ vertical and an NVIS antenna for 40 and 75 meters. The vertical worked pretty well, although there is a little “renewal” work to be done on this one (it’s been up for about 11 years so this is not unexpected).

The NVIS antenna consists of crossed, inverted “V” antennas (and these are somewhat short, electrically) mounted low to the ground. Any of you who spent time with the military (particularly in the Army) working communications, will recognize this as an updated version of the AS-2259. There are a few critical differences:

- 1) The AS-2259 used the hollow support mast as a very low loss feed line ... this was, in reality, a 16 foot, 1.5”, section of hard line. I did not do this, instead feeding the antenna with low loss coaxial at the point where the two lines cross in the center.

First & Second Quarter 2020

Winter to Summer Edition

Major KLARA Events

Winter Field Day

January 30-31, 2021

KLARA 2 Meter FM Simplex Challenge

Spring 2021 TBD

ARRL Field Day

June 26-27, 2021 with setup on June 25

Annual Red House Picnic

TBD

National Warplane Museum Airshow

July 9-11, 2021

Wine Country Classic Boat Regatta

July 17-18, 2021

KLARA Booth at Steuben County Fair

August 17-22, 2021

KLARA Hamfest

August 2021 TBD

KLARA All Day Tech Question Review and VE Testing

TBD

KLARA Annual Meeting and Elections

TBD

Wineglass Marathon

October 3, 2021

Annual End of the Season Picnic

October 2020 TBD

Annual Christmas Dinner

December 2020 TBD

**Talk with us on-the-air using
our linked repeater system:**

Bath, NY 145.190- 110.9
Arkport, NY 147.045+ 110.9
Jasper, NY 147.330+ 110.9

Visit us on the web:

<https://klara.us>



2) The AS-2259 used insulated wire. We used 14 gauge un-insulated flex weave wire. This is a hard drawn copper stranded wire.

Since the elements are short, electrically, this antenna does require a good tuner. The LDG Z-100 plus had no problem tuning anywhere in the two bands we designed this antenna for. This will also tune in the 20 meter band, although it's not efficient, at all.

If this antenna, or concept, would interest enough people, I would be willing to write a newsletter article about it.

The critical question for any field day antenna, of course, is "How did it play?"

The answer is pretty well! For the 24 hour period (2:00 PM on Saturday to 2:00 PM on Sunday) I actually worked about 10 to 11 hours of time "in the chair".

I made 55 contacts, primarily on 40 meter phone. I did not work any digital this year, thinking that SSB would give the NVIS antenna a true "acid" test. There was a lot of, what looked like, FT-8 and FT-4 traffic on these bands. It was tough to hold back, but I managed!

I, also, did not work much on 75 meters. This band was just beginning to pop when I went to bed, and was pretty dead when I went back to work the next morning.

We used a 100 watt signal on LSB. I did hear some signals on 40 meter USB (someone was not paying attention to the settings on their rig) as well as signals on 40 meter AM, although I did not try to work them.

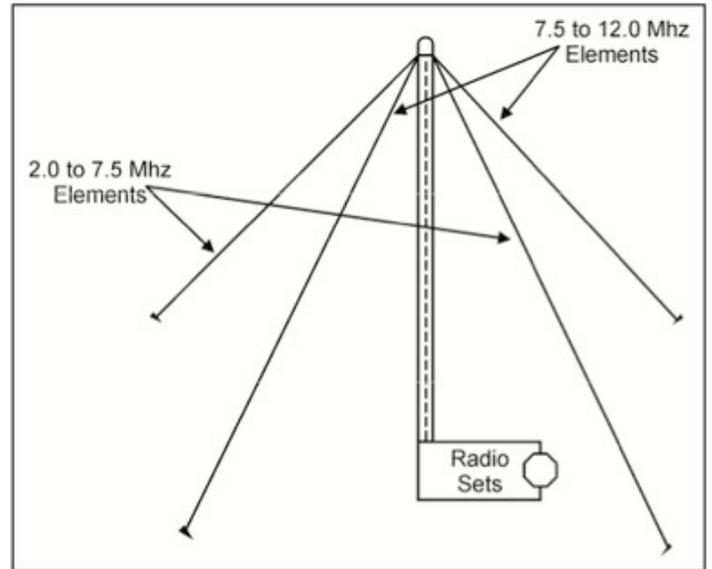
Our furthest contact was to southern Georgia, with good signals into the mid-West and upper mid-West (the 8 and 9 call areas), and workable signals into New York, Pennsylvania, New England, and the mid-South (the 1,2,3,4 call areas). I could easily hear signals from the Pacific Northwest and California (call areas 6 and 7), but was unable to make them hear me. I had no luck in the central US (call areas 0 and 5).

I made several contacts into Canada (Ontario South and the Maritimes). I was working a good signal to

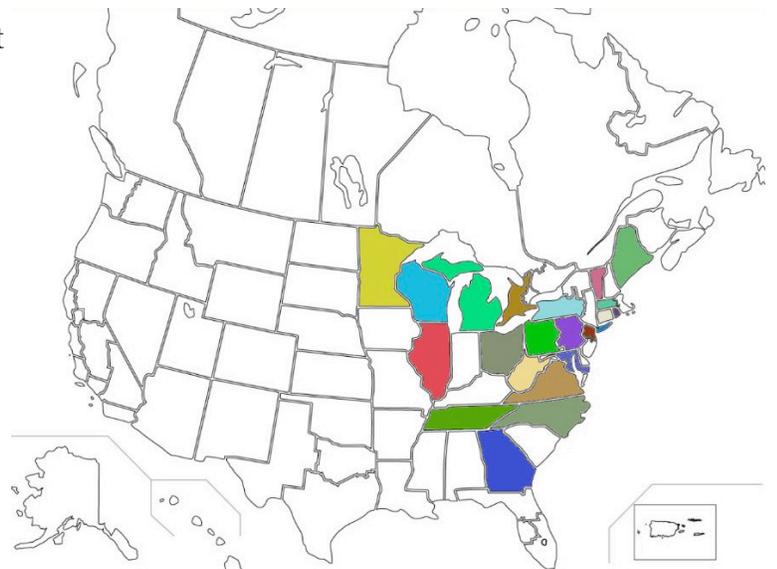
Prince Edward Island when Field Day timed out. I made the contact, but it's not in the log!

See also the map from N3FJP showing the distribution of contacts.

A reasonably good year for us. How did you do?



Note that I did not set the radio at the bottom of the mast. Instead we used 50 feet of low loss coax to feed the signal into the house. I could see no point in sitting in the RF pattern all day!



Map (from N3FJP Field Day logging program) showing ARRL Sections worked.

Baluns & Ununs - Part 1

What's the difference and what are they used for

by KLARA members Glenn Seiler (W3LSW) and Harold Scharmberg (N2FMS)

This past Spring Glenn was "reading the mail" during one of the KLARA 75 meter nets. There was some discussion going on about baluns and ununs. There were many questions and not too many answers. Gary (KC2YTD) suggested someone with a little more experience should write about it. Well, Glenn (with years of experience) decided to give it a try and Harold jumped in to add a little more. In case you're wondering, "reading the mail" is old time ham jargon for listening-in. Sort of like picking up your phone and listening in on your party line. Anybody remember that?

Baluns and ununs are devices used to match or couple transmission or feed lines to antennas and in some cases, feed lines to transmitters or receivers. Sometimes they are needed and sometimes they're not. The whole idea is to get as much RF energy from your transmitter through the feed line and to the antenna as possible without getting RF in the shack, RFI, or perhaps even RF burns on your finger tips.

Ever key your transmitter and have one of your GFI's trip in your circuit breaker box? How about a smoke detector going off? Maybe your remote control garage door opener turning on or a ceiling fan turning off? Even worse - your XYL's favorite radio or TV program is wiped out when you transmit. A balun or a unun may help keep the XYL happy and stray RF out of the house!

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KLARA Field Day Entries

The ARRL reports they received Field Day Entries from the following KLARA members:

KC2VAW Joel	KS2YL Nancy
KC2YTD Gary	N2FMS Harold
KD2BPJ Belinda	W2JTC Jim
KD2GQG John	W2RMT Rick
KD2SPC Gary	W2RTH Ruth

Also participating in Field Day were members KD2CZY Donna and KD2GEB Brian. Each member's individual score will be added together for a total KLARA score. Results will be published in the December issue of QST.

In very simple terms, a balun matches or couples **balanced** to **unbalanced** feed lines and antennas. Ununs match or couple **unbalanced** transmission lines to **unbalanced** antennas.

Baluns, being transformers, can also be used to match impedance. A dipole (balanced antenna) has an impedance of about 72 ohms. A 1:1 balun will provide a good match to unbalanced coax. A G5RV dipole would work much better with a 4:1 balun between the 450 ohm balanced window line and the unbalanced coax feed line to the transmitter in the shack.

Ununs could be used to couple or match unbalanced antennas to unbalanced coax transmission line. A 4:1 unun will give a good match to a vertical antenna or an off center fed dipole antenna. A 9:1 could be used with an end fed long wire and perhaps a 49:1 for a half wave end fed wire.

In the next issue we will write about keeping common mode currents off the feed line and RF energy out of the shack and house.

Balanced Antennas

Dipole
Quad
Folded Dipole
Delta Loop

Unbalanced Antennas

Vertical
Off Center Fed Dipole
End Fed Long Wire

Balanced Feed Lines

Ladder Line
Window Line
Twin Lead

Unbalanced Feed Lines

Coax
Wave Guide

KLARA 2020 Winter Field Day

Winter Field Day was held again this past January. We setup indoors at the Steuben County Training Center. Members Jim Caneen W2JTC, Joel Fiske KC2VAW, Harold Scharmberg N2FMS, and Gary Stratton (KC2YTD) activated club station N2AAR.

KLARA participated in class 4i (4 stations operating simultaneously from an indoor location away from home) in ARRL Section WNY. KLARA placed first out of five indoor entries in the WNY Section.

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Winter Field Day was truly a team effort. KLARA members helping with on-the-air microphone, CW key, and digital keyboard duties along with station/antenna setup and food/snacks included:

Jerrilyn Baker KE2YB
Nancy Bob KS2YL
Belinda Connor KD2BPJ
Brian Connor KD2GEB
Donna Fiske KD2CZY

65 phone (SSB & FM) contacts were made along with 25 CW and 61 digital QSO's. The KLARA team earned 5,500 points and placed 44th out of

170 indoor entries nation-wide. The digital effort was outstanding placing 21st out of 170.

WFD 2021 is scheduled for January 30 & 31 next winter. Please join in on the fun. Can't think of a better activity for a cold WNY weekend!

KLARA Member Rick Torrey W2RMT operated a 1H (home) station. He made 79 digital and 10 phone contacts. His fantastic number of digital QSO's earned him 1st out of all 1H entries in the WNY Section. His total score was an impressive 1510 points. Great job Rick!

Show Us Your Shack

by KLARION editor Harold Scharmberg (N2FMS)

I've asked some KLARA members to show off their shacks but didn't get any volunteers so I decided to showoff all 42" of mine. 42" you ask? Yes it all fits on a 42" wide desk in my basement.



I have 3 complete stations on my desk. First is an Icom 7300. It feeds into a MFJ-962D tuner (used only for a SWR meter) to an Icom AH-4 remote tuner to a dipole antenna. Next is an Icom 7100 into an Ameritron ALS-600 solid state amp through a Daiwa SWR meter to a MFJ remote tuner at the base of my vertical antenna. My third station is an Icom 2300H transceiver for 2 meter FM.



A patch panel (photo on left) used in place of

switches to reconfigure antenna to radio connections. Still need to make jumpers for amp input/output. A heavy wire bonds the panel to my

ground buss. My 7100 is also used for portable operations. It was used for Winter Field Day, RV camping trips and made 148 QSO's (80 through 10 meters) into 35 states during the 2020 ARRL Field Day with my 31' vertical on the back of our camper.



On the left is my 43' aluminum vertical antenna in my backyard. Below the antenna are 36 radials buried 1" to 2" in the ground. At the base of the antenna is a MFJ remote

tuner in a weather resistant storage bin. In the bin are two heavy rocks under the tuner to prevent the wind from blowing it away.



Aluminum angle irons hold a mast above my garage. On top of the mast is a VHF/UHF vertical antenna. Mounted on a short standoff is a dipole antenna fed with window line going to a AH-4 remote tuner just inside the garage wall.



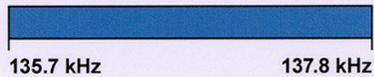
US Amateur Radio Bands

Operator license classes: **E** = Amateur Extra **A** = Advanced **G** = General **T** = Technician **N** = Novice
 CW operation is permitted throughout all amateur bands. Except as noted, all frequencies are in megahertz (MHz).

■ = RTTY, data, phone, image
 ■ = USB phone, RTTY, data and CW
 ■ = RTTY and data
 ■ = phone and image
■ = SSB phone
M = CW only

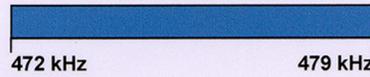
LF – Low Frequency band

2200 Meters (135 kHz) E,A,G
 1 W EIRP maximum

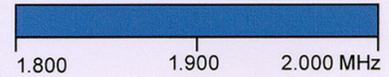


MF – Medium Frequency bands

630 Meters (472 kHz) E,A,G
 5 W EIRP max, except in Alaska within 496 miles of Russia where the limit is 1 W EIRP



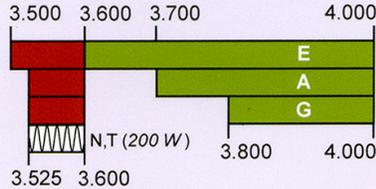
160 Meters (1.8 MHz) E,A,G



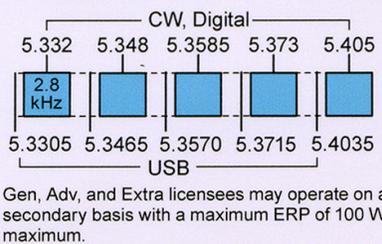
Amateurs wishing to operate on **2200 or 630 meters** must first register with the Utilities Technology Council online at <https://utc.org/plc-database-amateur-notification-process/>. You need only register once for each band.

HF – High Frequency bands

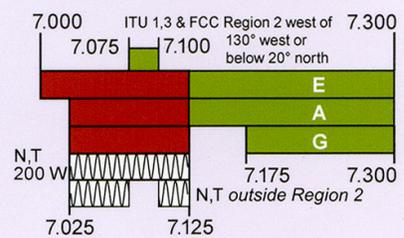
80 Meters (3.5 MHz) E,A,G,T,N



60 Meters (5.3 MHz) E, A, G (100 W)



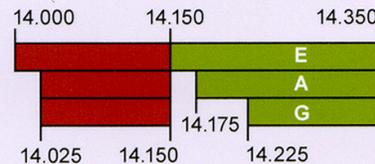
40 Meters (7 MHz) E,A,G,T,N



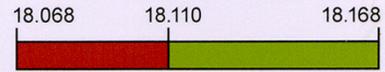
30 Meters (10.1 MHz) E,A,G



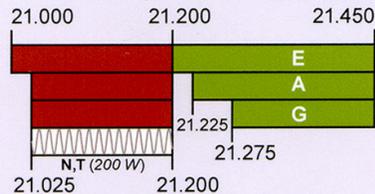
20 Meters (14 MHz) E,A,G



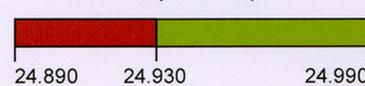
17 Meters (18 MHz) E,A,G



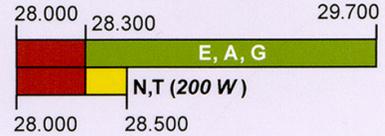
15 Meters (21 MHz) E,A,G,T,N



12 Meters (24 MHz) E,A,G

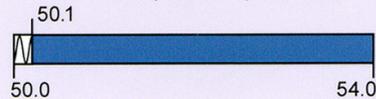


10 Meters (28 MHz) E,A,G,T,N



VHF – Very High Frequency bands

6 Meters (50 MHz) E,A,G,T



2 Meters (144 MHz) E,A,G,T



1.25 Meters (222 MHz) E,A,G,T,N

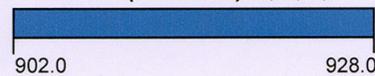


UHF – Ultra High Frequency bands

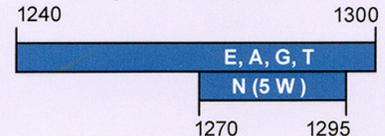
70 cm (420 MHz) E,A,G,T



33 cm (902 MHz) E,A,G,T



23 cm (1240 MHz) E,A,G,T,N



SHF&EHF – Super and Extremely High Frequency bands

All licensees except Novices are authorized all modes on the following frequencies:

2300-2310 MHz	3300-3500 MHz	10.0-10.5 GHz	47.0-47.2 GHz	122.25-123.0 GHz	241-250 GHz
2390-2450 MHz	5650-5925 MHz	24.0-24.25 GHz	76.0-81.0 GHz	134-141 GHz	All above 275 GHz

See www.rrl.org/and-plan for detailed band plans.

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