





About Amateur Radio and ARRL

The American Radio Relay League (ARRL) is The National Association for Amateur Radio in the US. Today, with over 158,000 members, ARRL is the largest organization of radio amateurs in the world. Our mission is simple:

To advance the art, science, and enjoyment of amateur radio.

In 2016, ARRL revised its vision statement to more incisively state the organization's intentions for our Second Century, which began with our centennial in 2014.

ARRL's Vision Statement

As The National Association for Amateur Radio in the United States, ARRL:

- Supports the awareness and growth of amateur radio worldwide;
- Advocates for meaningful access to radio spectrum;
- Strives for every member to get involved, get active, and get on the air;
- Encourages radio experimentation and, through its members, advances radio technology and education; and
- Organizes and trains volunteers to serve their communities by providing public service and emergency communications.

The execution of our mission is based on ARRL's Five Pillars: Public Service, Advocacy, Education, Technology, and Membership.



Celebrated inventor and entrepreneur Hiram Percy Maxim (1869-1936) created the American Radio Relay League in 1914 to help facilitate the relaying of messages via amateur radio. The resulting organized network of amateur radio operators helped send messages farther than any one station could reach at that time.

A Message From the President



As 2021 began, many of us faced the new year full of questions that the old year raised. Uncertainty about how — or whether — to proceed in business, education, relationships, and everyday life was still prevalent. As the year progressed, it proved to be full of stops and starts — restrictions of various kinds lifted in some areas but were maintained in others. We attended virtual and in-person ham radio events both large and small. In that regard, the year offered a mixed bag of opportunities and experiences.

One thing that was decidedly not mixed was the fact that 2021 was, for ARRL, a year of steady advancement. The League never slowed down in 2020, a devastating year due to COVID-19, giving us the momentum to forge ahead in 2021, fueled by the same thing that gave strength to many others — the hope of coming back together in person. Headquarters staff did a remarkable job in maintaining high standards for delivering services to our members.

It began bit by bit in the early months of the year, with Headquarters staff returning to the office, and reached a turning point on July 15, the day we rededicated ARRL Headquarters and reopened the building and W1AW to our members. The rededication ceremony included ARRL staff, the Officers and Board of Directors, as well as Connecticut District 1 US Congressman John B. Larson; Connecticut State Senator Matt Lesser, and representatives from the National Weather Service; the American Red Cross; the Connecticut Department of Emergency Services and Public Protection; the International Amateur Radio Union; Radio Amateurs of Canada; the Connecticut General Assembly, and the Town of Newington.

The rededication ceremony gave all of us an opportunity to reflect on where ARRL has been, and affirm where we are headed, especially once we were able to open our doors, able to greet and serve members again — and better than before!

Later that summer, ARRL was back at in-person events as well, starting with the Huntsville Hamfest (host of the 2021 ARRL Southeastern Division Convention) in August, and continued the in-person trend at the Northeast HamXposition (host of the 2021 ARRL New England Division Convention) in September, and Pacificon (host of the annual ARRL Pacific Division Convention) in October. I attended Hunstville and Pacificon, and a number of other gatherings and events, and was pleased to be back amid the community that I love.

I hope you're as excited as I am to see what's next as ARRL continues to advance the art, science, and enjoyment of amateur radio with and for its members.

73,

Rick Roderick, K5UR

President

Annual Report of the Chief Executive Officer

During 2020 and 2021, ARRL experienced something most organizations never have: survival through a second global pandemic. This year marked what some have rightly termed "coming out of the darkness into the light." Radio amateurs, having shown resilience in maintaining contact through our radios and spectrum, are now getting back together in person. And although there are still risks associated with COVID-19 spreading between people, the impact seems to have been moderated by vaccines and treatments to a point where people just want to get back to some sense of normalcy.

For ARRL, this manifested in a return to major events. Kicking off this return was our exhibit at the Huntsville Hamfest in Alabama, where we were excited to see members in person once again. We also participated in the Northeast HamXposition in Massachusetts, and Pacificon in San Ramon, California. In each case, our booth was lively with the excitement of getting back together again, renewing friendships and memberships, and knowing that both amateur radio and our beloved ARRL are healthy.



While membership has been relatively flat for some 40 years now, settling in around the 160,000 mark, the number of FCC-licensed hams continues to show steady growth. It was just 10 years ago where, in our annual report, we were celebrating the achievement of 700,000 licensed hams in the United States. Today, that number is closing in on 800,000. We began a census project with Section Managers and Affiliated Clubs to examine the makeup of these licensed hams, and to determine how, as an association, we can move more of these licensees to become radio-active!

One thing we know for sure is that ARRL members are active hams. Whether they're on the air chatting every day, participating in Field Day, contesting, chasing awards, tracking satellites, or racking up digital mode contacts, our members are not just sitting idly by. In anticipation of Field Day, Cycle 25, and opportunities to get on the air from parks around the country, we undertook offering an antenna kit to get more members active. The End-Fed Half-Wave kit was designed and supported to guarantee success for the kit builder. Having sold thousands of these kits, we surveyed builders to see how they made out. More than 80% reported having successfully built the kit and gotten on the air with the new antenna. And they want ARRL to offer more kits!

Creating content for ARRL has been foundational since the dawn of the organization. We continue to produce four fantastic magazines: *QST*, *On the Air*, *QEX*, and *NCJ*. But as part of our digital transformation, we have expanded how we produce and deliver content for our members. We are increasingly creating videos. On our YouTube channel, you'll find short videos highlighting membership benefits and services, excerpts from events and presentations, and tutorials on a variety of amateur radio interests. We are also producing educational video tracks and presentations for our new ARRL Learning Center, and we added the license instruction videos of our newest *QST* columnist, Dave Casler, KEØOG.

2021 saw a tremendous upgrade to our Education & Learning program areas. ARRL hired a new manager, Steve Goodgame, K5ATA, a classroom teacher who is now bringing his success with introducing radio theory in the classroom and getting students licensed to the national scene. Beyond working with young people through ARRL resources, we continue to offer the Teachers Institute on Wireless Technology, training teachers in a curriculum they can use to develop their students' interest in radio electronics and radio communications. We will be looking to dramatically expand that program in 2022-2023. We have also continued our outreach to the blind and visually impaired community, expanding their access to content and experiential opportunities.

2021 also marked a concerted effort by Headquarters and the ARRL Board to put spotlights on the Field Organization and emergency communications. During the year we hired two key positions: Field Services Manager Mike Walters, W8ZY, and Director of Emergency Management Josh Johnston, KE5MHV. The Board created a new standing committee, the Emergency Communications and Field Services Committee, to establish important guidance and recommended initiatives in these areas. Outreach to our Section Managers, Section Emergency Coordinators, Affiliated Clubs, and government agencies took a huge leap forward.

An important relationship for ARRL has been with the Amateur Radio Digital Communications (ARDC) foundation. Through their generosity, ARRL was able to add \$750,000 to the ARRL Foundation scholarship program. These scholarships, ranging from \$5,000 to \$25,000, were awarded to 45 recipients. In addition, ARDC provided the ARRL Foundation \$500,000 to establish a clubs grant program. This program, which will provide two rounds of funding during summer and fall 2022, seeks to help clubs revitalize and grow.

I would like to thank the many members who have reached out to me with positive feelings and thoughts about ARRL, the direction we are taking, and the results that you have been seeing. These comments of support are hugely impactful on me and the entire team at ARRL, as we work tirelessly to support our community and this avocation that we all love.

Very 73,

David A. Minster, NA2AA Chief Executive Officer

2021 was the year we came back together in person, after being apart for so long. Though ARRL didn't miss a beat in 2020, maintaining services for members even while pandemic restrictions held sway, things didn't feel the same. Thankfully, in 2021, the opportunity to connect face to face returned as the year went on, and ARRL was ready to jump in and reconnect with the amateur radio community.



Back Together

ARRL introduced two kits in 2021 to support an initiative to engage members and prospective hams in project building, experimentation, and experiences that will lead them to becoming active — or more active, as the case may be — in amateur radio.

In April, we established a partnership with HF Kits, a Netherlands-based maker of a high-quality end-fed half-wave antenna kit for HF use. The kit has provided a rich foundation for additional learning content, including a feature in *On the Air* magazine, attention in a Field Day pull-out section in *QST*, and on the ARRL website. We've found that builders are highly satisfied with the kit, and would enjoy other similar projects.

We also introduced ARRL's new radio receiver kit, designed by student engineers — and 2020 ARRL Foundation Scholarship winners — Levi Zima, KN4YHS and his sister Kirsten Zima, KC9RWG. The kit is a tunable and volume-controlled radio receiver with a frequency range of approximately 40 — 150 MHz. It can pick up



Top: The ARRL Introduction to Radio Receiver Kit. Above: The ARRL Headquarters rededication ceremony brought together local dignitaries as well as ARRL Officers, Board members, staff, and members.

transmissions from nearby FM radio stations, air traffic control towers, and similar transmitting sources. The kit is a great resource for learning about basic radio principles. We find that ARRL members are using it to develop meaningful interactions through their outreach activities to introduce radio communications to others.

On July 15, we hosted a rededication of ARRL Headquarters in Newington, Connecticut, to reaffirm ARRL's commitment to all radio amateurs who enhance the communications capability and security of the nation. The event, which coincided with the July 2021 Board meeting, was attended by ARRL's Board of Directors, as well as Connecticut District 1 US Congressman John B. Larson; Connecticut State Senator Matt Lesser; representatives of the National Weather Service; the American Red Cross: the Connecticut Department of Emergency Services and Public Protection; the International Amateur Radio Union (IARU); Radio Amateurs of Canada; Connecticut General Assembly; and the Town of Newington, and, of course, ARRL Headquarters staff.

Later that summer, ARRL was back in person at conventions, following nearly 18 months of cancelled events due to the COVID-19 pandemic, starting with the annual Huntsville Hamfest in August. Huntsville served as host for the 2021 ARRL Southeastern Division Convention, and had the distinction of being the first convention ARRL supported with staff representatives and an exhibit since Orlando HamCation in February 2020. Huntsville was also the first convention appearance for David Minster, NA2AA, in his role as ARRL Chief Executive Officer. In September, ARRL greeted members in person at the annual Northeast HamXposition, which hosted the 2021 ARRL New England Division Convention, and rounded out our return to convenKirsten Zima, KC9RWG (right), mentoring a convention attendee building the Intro to Radio Receiver Kit. ARRL introduced the kit to members in 2021 as a basis for introducing anyone to radio.



tions in October with an exhibit at Pacificon, which hosts the annual ARRL Pacific Division Convention and is sponsored by the Mount Diablo Amateur Radio Club.

At the end of the year, ARRL joined with the Radio Society of Great Britain (RSGB) to celebrate the centenary of the ARRL-sponsored Transatlantic Tests, which aimed to prove that shorter wavelength frequencies could propagate long distances using transmitters running less than 1 kW. On December 11, 1921, radio history was made when the signal from amateur station 1BCG in Greenwich, Connecticut, was heard in Ardrossan, Scotland, marking the first successful transatlantic radio transmission using shortwave frequencies. On December 12, 2021, ARRL and RSGB activated CW special event stations for 6 hours in the 160-Meter Transatlantic Centenary QSO Party. RSGB activated GB2ZE from Scotland (their call sign was a nod to receiver designer Paul Godley, 2ZE, whom ARRL sent to Europe in 1921 to listen for test stations), with a team of stations from the GMDX Group, a Scotland-based DX society, sharing operating duties. ARRL activated W1AW. The GMDX Group

announced that it would award a quaich — a traditional Scottish drinking cup representing friendship — to the first stations in North America and the UK to complete contacts with both W1AW and GB2ZE during the event. The cup winners were Rick Niswander, K7GM, and Bob Barden, MDØCCE. This celebration of teamwork and fellowship was a fitting end to the year that brought us all back together.

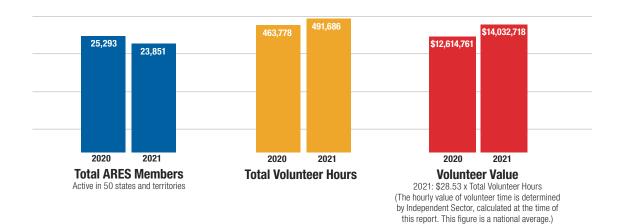


The December 2021 issues of *QST* and RSGB's *RadCom* sported the same cover image to celebrate the centenary of the December 1921 Transatlantic Tests.



Emergency Management

The Amateur Radio Service is most well-known for providing communications services at times when other methods are inoperable, through ARRL's Amateur Radio Emergency Service® (ARES®). ARES activity increased in 2021, as pandemic restrictions eased and lifted.



ARES Summary for 2021

Total ARES Membership: 23,851
Total Sections Reporting: 374
Total ARES Events: 36,496
Total Volunteer Hours: 491,686
Total Volunteer Value Provided: \$14,032,718



ARRL Board of Directors Creates Emergency Communications and Field Services Committee

At its July 2021 meeting, the ARRL Board of Directors approved By-Law changes creating a third standing committee that joins the existing Administration and Finance Committee and Programs and Services Committee.

The charter of the new Emergency Communications and Field Services Committee (EC-FSC) is to develop and recommend new or modified Board policy and programs for emergency communications through the Amateur Radio Emergency Service® (ARES®) and National Traffic System™ (NTS™) entities.

The committee also will offer enhanced support for its Field Organization leadership volunteers, including Section Managers, and an increased focus on ARRL-Affiliated Clubs.

The EC-FSC will further provide guidance to the CEO in translating Board policy into prioritized tasking, funding, and staffing of programs, services, and training in support of amateur radio emergency communications, field organization volunteers, and recruitment and retention of new and existing members through assistance to Affiliated and Special Service Clubs.

The EC-FSC will have additional responsibility for monitoring and assessing trends in emergency communications technology and participant skills worldwide, and for identifying "best practices" for voluntary emergency communications provided by ARES and NTS, coordinating and cooperating with other amateur radio national societies as appropriate.

ARRL Welcomes New Director of Emergency Management

In late 2021, ARRL hired Josh Johnston, KE5MHV, into the role of Director of Emergency Management. Johnston is from Ozone, Arkansas, and comes to ARRL with 16 years of experience as the Director of Johnson County (Arkansas) Department of Emergency Management. He holds an Amateur Extra-class license, and is an ARES Emergency Coordinator, Volunteer Examiner, and ARRL-registered Instructor. Johnston is also certified in the Federal Emergency Management Agency's (FEMA) National Incident Management System (NIMS) and is a Cybersecurity and Infrastructure Security Agency (CISA) Communications Unit Leader (COML). He holds a Bachelor of Science in Emergency Administration and Management from Arkansas Tech University.

"I am happy to welcome Josh to the ARRL staff and to add his talent and knowledge to our team," said ARRL CEO David Minster, NA2AA. "His contribution will help ARRL continue to support our dedicated volunteers of the Amateur Radio Emergency Service, improve opportunities for training, and advance our relationships throughout the EmComm community." With extensive experience in inter-agency cooperation and planning, Johnston is well versed in the different aspects of emergency management and leading both professional and volunteer operators. He has experience in communications planning and execution in the field and at local and state levels. As an Arkansas Master Certified Emergency Manager and past Board member of Arkansas Emergency Management Association, where he served as president for 2 years, Johnston worked with government and agency representatives, and has been boots-on-the-ground in the field. Johnston said, "I look forward to working with you all and learning the different roles and responsibilities we as amateur radio operators perform around the country. I am also excited about the future of ARES and the emergency communications community as a whole."



ARRL Director of Emergency Management Josh Johnston, KE5MHV.



ARES and Red Cross Cooperate to Assist Storm-Affected Residents in Texas

In February 2021, ARRL Amateur Radio Emergency Service (ARES) and American Red Cross volunteers joined forces under the ARRL/American Red Cross Memorandum of Understanding in responding to the situation resulting from unseasonably frigid weather in Texas. Kevin McCoy, KF5FUZ, said the Red Cross formally requested an ARES activation to address the effects of the natural disaster, which included a lack of drinking water, power outages, fuel shortages, and frozen plumbing, among others. The Red Cross in Central Texas supported more than 60 warming shelters at the request of governmental agencies.

"We made a special effort to use Winlink email over radio to get reports of infrastructure problems and unmet needs [and to] communicate information about warming centers," McCoy said. "I would say that Winlink operators attending local nets and passing on information was the most valuable contribution in this unusual and unprecedented disaster. We had literally hundreds of Winlink operators across Texas who were trained and ready." Several teams deployed to support emergency operations centers (EOCs) in Bexar, Brazos, Kerr, Travis, and Williamson counties.

On February 20, the Red Cross made a formal stand-down request to Texas ARES sections from the Central and South Texas Red Cross Region. "Transportation, communication, and internet had restored sufficiently to allow for that change of status," McCoy said.

Alan Bieber, KIØEP, operating during an Arapahoe County ARES weather mission. [Drew Shattuck, KFØAPV, photo]



Colorado Blizzard Emergency Response

Colorado's Front Range, the eastern section of the Southern Rocky Mountains, had a snowstorm on March 13 – 14, 2021 that was to be the fourth largest winter storm in Arapahoe County's history. For this event, Arapahoe County ARES was instructed to shelter in place and provide real-time intelligence to county partner agencies. The primary method for ham radio-relayed weather information was the use of a shared Google spreadsheet, which allowed agencies to monitor weather data such as snow drift, snow totals, wind speeds, temperature, and road conditions. Armed with this data, county agencies used snow totals to deploy snow-clearing or rescue assets to target areas to assist the public more effectively. For example, reports of higher drifting snow totals in the east encouraged deployment of heavy equipment at that site.

According to Arapahoe County ARES Emergency Coordinator Peter Meer, KCØVAQ, the team was on standby for 10 hours on March 11, and fully active for 8 hours on March 12, along with partner ARES districts: Jefferson County, Denver County, Douglas and Elbert Counties, Boulder County, and Adams County. Over 260 hours of assistance were given, along with 108 weather observations from Arapahoe's 19 ARES volunteers. Meer summed up the group's efforts, by stating, "As Emergency Coordinator for Arapahoe County, I am extremely proud of the help we provided. Thank you to all our members who participated."



Post-blizzard conditions of the March 2021 storm, in Denver, Colorado. [Drew Shattuck, KFØAPV, photo]

Texas Club Averts a Train Disaster

Every July, the city of Weatherford, Texas, holds a Peach Festival that includes a bicycle ride. In 2021, the Tri-County Amateur Radio Club of Azle, Texas, performed pre-event planning, organizing the net control operators, rest stop operators, and SAG vehicle operators. The Amateur Radio Club of Parker County and other clubs' members signed up for various radio positions to support the bicycle event.

The net control plan also called for a Parker County RACES operator to work the radios in the Parker County EOC. This operator would be able to help with radio traffic between the fire/EMS dispatchers, the bicycle ride amateur radio net control, and the county Sherriff's deputies performing traffic control at busy intersections.

The event began without incident, but eventually an emergency call came from Mike Burns, KE5NCS, who was in SAG 3, sweeping the 61-mile course northbound. Net control Jon Diner, N5JLD, issued a standby, hold all radio traffic order, and asked Burns to proceed with his emergency traffic.

Burns indicated that they had been following a pilot car and tractor/lowboy trailer with a large piece of equipment. The tractor-trailer high-centered and stopped on the Union Pacific Railroad road crossing, then Burns heard an eastbound train blowing its horn for the road crossing.

Upon hearing the details, EOC Ride Control operator Thad Weikal, KG5ATD, turned up the radio audio so the dispatcher could hear the traffic clearly. The dispatcher immediately called Union Pacific Railroad, and Weikal used a fire/EMS radio to make a county-wide call to the county law enforcement dispatcher.

Before long the dispatcher relayed the information that Union Pacific had all trains at full stop on that track. Weikal relayed that information to the county dispatcher as well as the ride net control, N5JLD. SAG 3 reported the eastbound train had stopped 30 yards short of the tractor-trailer. There were no injuries or equipment damage. Weikal reported the road crossing clear 11/2 hours later.

Thanks went out to all amateur radio volunteers and fire/dispatch operators for their quick effort to help narrowly prevent a disastrous collision between a train and a tractor-trailer hauling a bulldozer with a gross weight of 186,000 pounds.

ARES Net Activated in Preparation for Tropical Storm Elsa

In early July, the Northern Florida Section activated the ARES Net on 3.950 kHz for Tropical Storm Elsa, which had briefly been a hurricane. The Northern Florida and West Central Florida Sections activated members in various roles, prompting Northern Florida Section Emergency Coordinator Karl Martin, K4HBN (now a Silent Key), to activate the HF net to provide any communications support that might be needed. An open net was activated on SARnet, a UHF-linked repeater network. Tropical Storm Elsa moved northward, nearly parallel to Florida's western coast, bringing heavy rain and gusty winds, which spread inland across the western Florida peninsula. Elsa made landfall on July 7 along the north Florida Gulf Coast then turned northeast, moving into north Florida/south Georgia before accelerating along the eastern seaboard where it later became post-tropical.

Tropical Storm Henri Prompts New England ARES and SKYWARN Activations

New England section ARES and SKYWARN teams responded to Tropical Storm Henri and its impacts both as a tropical storm on Sunday, August 22, along with its remnants tracking back through the area on Monday, August 23. Henri caused damaging winds, storm surge flooding, heavy rainfall leading to flash flooding, and Henri's remnants caused three weak EFO tornadoes affecting communities in northeastern Massachusetts on that Monday.

ARRL Eastern Massachusetts ARES Section Emergency Coordinator and SKYWARN Coordinator Rob Macedo, KD1CY, said, "It was an extremely busy 2 days dealing with Tropical Storm Henri." Macedo added that 2 days prior to Henri, "We dealt with flash flooding and two tornadoes in southern New England from the remnants of Tropical Storm Fred."

The VoIP Hurricane Net and operations on the New England EchoLink and IRLP reflector were combined to form one large operation during Henri. This setup was used effectively in the past for tropical systems such as Tropical Storm Irene in August 2011, and Hurricane Sandy in October 2012.

The Hurricane Watch Net was also active during Henri, despite the system weakening to a tropical storm, given its proximity to the coast and the chance for higher impacts in the New England region. WX4NHC, the amateur radio station at the National Hurricane Center, was also active during Henri.

Rhode Island was hardest hit by Henri as it made landfall in Westerly, around 12:30 PM on August 22. The state had the most power outages, with approximately 80,000 at the height of the storm, which is roughly 15 – 20% of the state. In southern New England, encompassing Massachusetts, Rhode Island, and Connecticut, over 130,000 were without power.

Rhode Island ARES held multiple nets throughout the day Sunday, relayed SKYWARN criteria reports into NWS Boston/Norton, the National Hurricane Center, and maintained a listening watch on the NB1RI repeater network between formal nets.

Connecticut SKYWARN operations were active in Hartford, Tolland, and Windham counties. Reports of wind damage exacerbated by the wet conditions and additional rainfall along with flooding, road closures due to flooding and measured rainfall reports ranging from 3-5" with isolated amounts were



Post-storm flooding in Suwannee, Florida.

Report to America

recorded in the state. Roger Jeanfaivre, K1PAI, held three nets on the 146.790 MHz Vernon repeater, and Windham County ARES and SKYWARN operators held a net Sunday evening with damage reports sent to the WX1BOX post net.

Western Massachusetts ARES and SKYWARN were active with nets and provided rainfall and wind damage reports from portions of southwest Massachusetts. Bob Meneguzzo, K1YO, Western Massachusetts ARES Section Emergency Coordinator, set up a net schedule working with his team on the 146.94 MHz Mount Tom repeater. The Southwick EOC was on the air with Charlie Dunlap, K1II, providing storm information along with several SKYWARN coordinators and net control operators from the Western Massachusetts SKYWARN team.

The remnants of Henri caused an additional round of flash flooding with heavy rainfall in southern New England along with three weak EFO tornadoes in the communities of Marlborough, Bolton, and Stow, Massachusetts on Monday, August 23, 2021. Amateur radio operators were critical in getting the storm damage reports from all three tornadoes.

Additional tornadoes occurred in Bolton and Stow, Massachusetts. Additional flash flooding occurred in parts of southeast Massachusetts with the remnants of Henri as 2-3"+ of rain occurred with some of this rain falling in as little as 1-2 hours. This caused urban and poor drainage flooding in communities such as Fall River, Westport, and Dartmouth. Henri finally moved out of the region by early Tuesday morning.

Julio Ripoll, WD4R, Assistant Coordinator of WX4NHC, thanked the VoIP Hurricane Net and Hurricane Watch Net members, saying, "[They] have always done a great job and have been extremely supportive of WX4NHC at the National Hurricane Center. They are a vital part of the WX4NHC team and part of our elite group we call 'Hurricane Hams.'" Ripoll added, "WX4NHC operators rely heavily on the work of the hurricane nets and are very appreciative of their time and efforts to gather surface reports from stations in the affected areas. These reports are vital to NHC as they paint a picture of ground-level physical conditions in real time. We all work as a team with a common goal to help NHC, which will help those in the affected areas and hopefully help save lives."

A Red Cross official expressed gratitude in a letter to radio amateurs who activated in response to Tropical Storm Henri, saying, "I thank the Amateur Radio Emergency Service and SKYWARN teams for the hams' support of the American Red Cross Disaster Response to Tropical Storm Henri. Amateur radio's support of the humanitarian response to help our neighbors is greatly appreciated. Please pass on Red Cross thanks to the hams that are on the nets and your alert groups."

Catastrophic Category Four Hurricane Ida Responses

The Hurricane Watch Net and the VoIP Hurricane Net funneled radio amateurs' critical observations and reports to National Hurricane Center forecasters during Ida, a Category 4 Atlantic hurricane that was the second-most destructive and intense hurricane to hit Louisiana on record, behind historic Hurricane Katrina in 2005. Ida made landfall on August 29 with winds of 150 MPH. The storm ended up causing flooding across the northeastern region of the country.

In an August 30 Order, the FCC granted a temporary waiver sought by ARRL to facilitate relief communications related to Hurricane Ida. The waiver also applied to relief communications directly related to any future hurricane within the next 60 days, and permitted radio amateurs handling hurricane relief communications on HF to use any protocol that would comply with the FCC's rules but for the symbol rate limits. FEMA announced HF interoperability activity on 60-meter channels 1 and 2.

ARES Emergency Coordinators in some hard-hit parishes activated volunteers for relief and recovery operations. The Louisiana ARES Emergency Net was ultimately put on standby, and the Louisiana Traffic Net operated 7 days a week.

ARRL HQ shipped Ham Aid kits to Louisiana ARES Region 3 for use during their recovery efforts. The kits include equipment for HF, VHF, and UHF, including handheld transceivers and "base station" antennas.

The W5RAR VHF repeater (146.805 MHz) was in use over a four-parish area — La Fourche, St. Charles, St. John, and Terrebonne, which suffered significant wireless system damage as well as a 911 system outage in St. John Parish. The St. Charles EOC was transmitting requests for services via the LWARN 440-MHz linked repeater system to Roger Farbe, WB5LHS. A communications team in support of Florida Baptist Disaster Relief established operations in a communications trailer at the Metairie Baptist Church. The Jefferson Parish EOC with ARES DEC Nick Frederick, W4NDF, and the City of Kenner EOC with Mary Vernoy, WB5IOE, assisted in maintaining a VHF net. The city of Kenner's fiber optic cable that provided internet was cut by Entergy so it could access one of its lines for repair, which left "two erratic cell phones and a VHF net" as the only communications Kenner had with Jefferson Parish. Vernoy had to climb onto the roof of the EOC to pick up the 2-meter antenna that had been knocked down by wind. She was cheered by the arrival of the Baptist team from Florida.

Florida Baptist Disaster Relief's Gordon Gibby, KX4Z, reported that Metairie was hard hit, with power outage and boil water notices issued, although the areas around hospitals had power restored early on. A report from Tangipahoa Parish said that as weather conditions deteriorated on August 29 — the day Hurricane Ida made landfall — local repeaters lost normal power but continued to function on battery backup power.



Hurricane Ida as it made landfall on August 29.

Two repeaters were lost when a tower collapsed. Formal weather nets were not conducted, in order to conserve power for emergency transmissions only. More than 30 parishes were affected by the storm, although cell phone coverage recovered rapidly. All 911 systems were reported operational as of September 7.

HWN and VOIP Hurricane Net Activate for Hurricane Larry

The Hurricane Watch Net (HWN) activated on September 10 in the run-up to Hurricane Larry, a Category 1 storm, making landfall. The VoIP (Voice over Internet Protocol) Hurricane Net activated on September 11. Using the VoIP Network joined to linked systems in Newfoundland, amateur radio operators collected reports relayed to the National Hurricane Center and Environment Canada as Hurricane Larry hammered cities and towns in the area. Hams sent scores of reports detailing damage to schools and homes, as well as news of power outages and evacuations. More than 40 man-hours involving both Canadian and US amateurs were involved in providing the reports received on both systems.

Centralia, Washington ARES Team Activates for Bombing

The ARES team of Centralia, Washington, was activated for a bombing on December 19, 2021. In the early morning hours of that Sunday, two men planted a bomb and blew up the ATM at a local bank in the community. The Washington State Patrol Bomb Squad and the FBI responded to assist the Centralia Police Department (CPD) in the investigation.

The Centralia ARES team staged its communications van next to the scene and put out the call for help. Thirteen ARES team members responded. Within the hour, ARES team members who had been trained to perform evidence searches were paired with CPD detectives to search the 10,000 square-foot crime scene. The search lasted just over an hour and the ARES team was then released.

Boulder County, Colorado Urban Fire Response Involves ARES

On December 30, 2021 the Marshall Fire roared through Superior and portions of Louisville, Boulder County, Colorado. The fire was fanned by intense winds, and consumed more than 6,200 acres. Approximately 1,084 homes and seven commercial structures were destroyed. Boulder County ARES (BCARES) received an activation request from the Boulder Office of Emergency Management (OEM) to activate the Emergency Operations Center (EOC) BCARES ESF-2A communications position. The BCARES Radio Network was activated, with three BCARES members assigned to the EOC. The BCARES net began resource management, with logging and staffing of assignments as issued by the OEM via the EOC.

Response tasking included support for evacuation sites and the establishment of emergency radio communications as commercial power failures and preventive shutdowns by commercial suppliers were evolving, resulting in the loss of commercial communications including landlines, DSL services and cellular communications. 911 services for the Boulder Mountain Communities also failed. To facilitate a restoration of these emergency services, BCARES activated the Mountain Emergency Radio Network (MERN).

Volunteer **Monitoring Program**

The Volunteer Monitoring (VM) Program springs from a March 2019 formal agreement between ARRL and the FCC to establish a new program to replace the Official Observer program. The program, proposed by the FCC as the result of the closure of numerous field offices and a substantial reduction of field staff, was developed with the intent to re-energize enforcement efforts in the Amateur Radio Service.

Under the program, cases of serious violations are first dealt with by VM Program Administrator Riley Hollingsworth, K4ZDH. Cases in which such efforts are unsuccessful are then referred to the FCC Enforcement Bureau. The FCC gives priority to cases developed by the VM Program, without the delay of ARRL having to refer cases through the FCC online complaint process.

2021 was the first full year of monitoring by approximately 175 VMs who reported over 50,000 hours of monitoring on all amateur radio bands including VHF, UHF, and above. These hours resulted in informal notifications to some operators in violation of the rules, and formal Advisory Notices to others. Good Operator commendations were issued for exemplary operation. The FCC also referred several cases to the VM Program for investigation.

Most complaints were resolved through Advisory Notices leading to dialogue with the subject operator. However, several cases were referred to the FCC for formal actions such as warning letters, monetary forfeitures, or administrative review of renewal applications.

Thanks to ARRL volunteer Bruce Horn, WA7BNM, both the reporting of hours monitored by the volunteers and their Incident Reporting were automated, in a transition from the system set up by Volunteer Monitor John Loughmiller, KB9AT. Horn's invaluable contribution enables effective auditing of VM performance and permits more time for the Program Administrator to focus on substantive compliance issues.

2021 incident reports from the Volunteer Monitors raised concerns about Technicians operating FT8 on 40 meters (mostly due to a misunderstanding of the rules), and other operators using frequencies not authorized to their license class. Several cases of deliberate interference on 40 meters and 75 meters were in preparation for FCC referral.

Of additional note in 2021 was the Department of Homeland Security, US Coast Guard commendation issued to a Volunteer Monitor in the Los Angeles area for his work in locating an errant distress signal.

Advocacy

ARRL is Amateur Radio's proactive advocate and representative voice in achieving regulatory and



Regional Telecommunications Organization — the Inter American Telecommunication Commission (CITEL) — and at the global level, the International Telecommunication Union (ITU).

Preparing for WRC-23

Immediately following the conclusion of WRC-19, work began to prepare for World Radiocommunication Conference 2023 (WRC-23). The ITU's First Conference Preparatory Meeting 2023 (CPM 23-1) in November 2019 assigned the various WRC-23 agenda items and topics to specific ITU Working Parties within the Radiocommunication Study Groups. The Study Groups are broadly divided as spectrum management, radiowave propagation, satellite services, terrestrial services, broadcasting service, and the science services. Each Study Group has several Working Parties where the work is performed for each WRC-23 agenda item. The results of the first session of the Conference Preparatory Meeting for WRC-23 (CPM 23-1) contains the agenda. Preparatory work on each agenda item is designated and assigned by CPM 23-1 to the "responsible" and "interested" Working Parties. Several WRC-23 agenda items relate to the Amateur Radio Service or the Amateur Satellite Service. ARRL participates in the relevant ITU-R Working Parties as well as the regional (CITEL) preparation of proposals that address each item as they may impact Amateur Radio. ARRL works very closely with members of the IARU team on all aspects of the WRC-23 agenda items.

ITU-R Working Party 5A (WP5A) is responsible for studies related to the land mobile service (excluding IMT) and including wireless access in the fixed service, and is also responsible

for studies related to the Amateur and Amateur Satellite Services. WP5A is considered the "home" for Amateur Radio within the ITU. Working Group 5A-1, is the Amateur and Amateur Satellite Services subgroup, chaired by Dale Hughes, VK1DSH, on the Australian delegation, while ARRL's Jon Siverling, WB3ERA, serves as the alternate chairman. This is where the work on revisions to Recommendation ITU-R M.1732 (characteristics of systems operating in the Amateur and Amateur Satellite Services for use in sharing studies) and the studies toward WRC-23 agenda item 9.1 b were performed.

WRC-23 will consider the "mid-bands" for IMT 2020 and beyond under agenda item 1.2: to consider identification of the frequency bands 3300 – 3400 MHz, 3600 – 3800 MHz, 6425 - 7025 MHz, 7025 - 7125 MHz, and 10.0 – 10.5 GHz for IMT, including possible additional allocations to the mobile service on a primary basis.

ARRL is advocating the retention of the amateur secondary allocation of 3300 -3400 MHz in Regions 2 and 3 as well as opposing the identification of the 10.0 -10.5 GHz band for IMT.

Two Working Parties (WP 5A and WP 4C) are working on the topic to determine if additional measures are required to ensure protection of the radionavigation-satellite (space-to-Earth) service in the band 1240 -1300 MHz. The Amateur and Amateur Satellite Services have successfully co-existed with all the primary services in the range 1240 – 1300 MHz for many years. ARRL advocates the position that any additional regulatory, operational, or technical measures incorporated into the Radio Regulations are unnecessary.

Specific proposed methods to address each WRC-23 agenda item will be contained in the CPM Report, which will be finalized in 2022. Throughout the preparation process leading up to WRC-23, ARRL actively participates in the FCC's WRC Advisory Committee (WAC).

Protecting Against Future Impacts

ARRL is vigilant on several agenda items that may impact Amateur Radio, such as the item to address the Earth Exploration Satellite Service (Active) spaceborne radar sounders "around" 45 MHz. ARRL worked to protect the adjacent 50 – 54 MHz amateur band. Another area that earned ARRL's attention was the spectrum needs and potential new allocations to the mobile-satellite service for future development of narrowband mobile-satellite systems.

Throughout 2020, ARRL has worked to protect the Amateur Services from any future harmful impact by wireless power transmission, whether for electric vehicles or for charging of portable/mobile devices. This work continued in 2021 within the ITU-R Working Party 1A.

Work with CITEL

ARRL participates in regional preparations within the Permanent Consultative Committees of the Inter-American Telecommunication Commission (CITEL). Regional proposals (Inter-American Proposals, or IAPs) for the World Conference from the America's Region are crafted in CITEL's Permanent Consultative Committee II: Radiocommunications.

ITU Elections

The ITU will hold the 2022 Plenipotentiary Conference and conduct elections for five management positions. ARRL is supporting the candidacy of Doreen Bogdan-Martin, KD2JTX, to be the next Secretary General of the ITU. She is currently the Director of the ITU Development Bureau (BDT) and a strong supporter of Amateur Radio in the ITU.

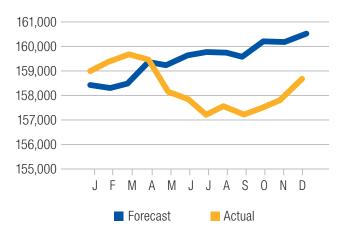
Membership, Marketing, and Communications

With 2021 proving to be another unpredictable year, the Membership, Marketing, and Communications Department concentrated its efforts on strengthening ARRL's value proposition, engagement, and membership service and support.

Returning to In-Person Events

Virtual events, such as our partnership with the QSO Today Virtual Ham Expo, allowed us to engage with members online, and allowed members to interact with each other. In addition, the cancellations of the ARRL National Convention in February and Dayton Hamvention® in May, had the

2021 Membership: Forecast vs. Actual



department hosting "At Home" virtual events that allowed us to offer specialty items and promotions to all members.

In August, the return to in-person events began with ARRL staff attending the Huntsville Hamfest in Alabama. The excitement of being able to meet members face to face is what makes these in-person events irreplaceable engagement opportunities. We were also lucky to attend HamXposition in Marlborough, Massachusetts, and Pacificon in San Ramon, California.

Growing Email Communications

In June, we introduced the *On the Air* email as a monthly resource for beginner and intermediate operators. The email features curated stories from ARRL's *On the Air* magazine, as well as original content, to help new hams get active and on the air. The email has grown to over 20,000 subscribers throughout the first 6 months.

Evolution of *The ARRL Current*, launched in 2020, created communication opportunities for various ARRL initiatives, such as fundraising, podcasts, events, education, etc. Featuring top stories from each of the four ARRL digital magazines — *QST*, *On the Air*, *QEX*, and *NCJ*. The subscriber base totaled 101,595 in 2021.

Membership

December 2021 ended with 158,238 members, including 29,017 new members (an 11% increase from 2020) and 275 new Life Members. While the total membership fell 1,846 members below the year-end goal, it reflects an above-industry average retention rate of 81.8%. As we move forward into 2022, we'll increase our focus on member retention by launching an onboarding program to welcome and acclimate new members.

Member Services

In an effort to better serve members, we extended phone support hours to be from 8 AM to 7 PM EST, Monday through Thursday, for a trial period in September. Members have taken advantage of these extended hours, and the effort received many positive responses. This has led to the permanent adoption of these hours.

Several staff members on the Member Services team were also involved in developing the new association management system, Personify, which will serve as the foundation for membership transactions and support other technology to come.

New Field Services Manager Mike Walters, W8ZY

Mike Walters, W8ZY, joined ARRL in June 2021 as Field Services Manager. An Amateur Extra-class ham, Mike was first licensed in 1977 in his native West Virginia. Professionally, Mike has worked in commercial broadcast as a radio announcer, and for the last 25 years in marketing for major companies like Nokia and Microsoft. Mike is also a US Army veteran having served in California, Texas, and Germany. Mike is an active Volunteer Examiner club trustee and repeater manager. He has served as District Emergency Coordinator and Section Emergency Coordinator in Connecticut, as well as a credentialed AUXCOM.

Mike's role as Field Services Manager places him at the forefront of supporting and working with the ARRL Field Organization of Section Managers and their appointees. Much of what Mike does is centered around ensuring that the Section Managers have the information that they need, as well as being a resource for questions concerning operations, clubs, and support.

New means of communication, such as the relaunch of ARRL's monthly *Club News* email newsletter allows ARRL to communicate with a large portion of the membership. Monthly virtual Section Manager meetings also allow for training and exchange of ideas among peers. Communication between ARRL and its Field Organization has been cited as an area that needs improvement, and Mike's intent as Field Services Manager is to improve and foster that communication.



New Initiatives and Highlights

- The October launch of the ARRL Learning Center, a new member benefit, resulted in over 4,400 courses accessed.
- New product initiatives included Field Day 2022, "Outdoors and On the Air" products, the popular End-Fed Half-Wave antenna kit, and a promotional notebook related to the 99th ARRL Handbook.
- Over 25,000 loyalty certificates and pins were awarded to those with 10+ years of continuous membership.
- The reopening of ARRL Headquarters and W1AW in July allowed volunteer tour guides to provide nearly 100 tours of the station.
- The 2021 ARRL Online Auction presented nearly 100 items and raised over \$35,000 to support ARRL programs and services.
- The ongoing survey for renewing members reported that 90% of members rate their ARRL membership as a "fair" or "more than fair" value for the investment.

Education & Learning Department

The Lifelong Learning Department saw some fundamental changes in 2021 — a name change to the Education and Learning Department, as well as a personnel change, with Steve Goodgame, K5ATA, taking on the role of manager in September 2021. A middle school computer science teacher, Goodgame says he has taught ham radio "in some form" for 20 years, leading close to 60 middle and high school students to earn their licenses in the past 3 years.

Popular ham radio YouTuber Steve Goodgame, K5ATA, became the Education and Learning Department Manager. [Steve Goodgame, K5ATA, photo]



Launch of the Learning Center

The Education and Learning Department launched in October 2021 with the ARRL Learning Center. A centralized hub for educational and training videos, the Learning Center contains approximately 50 webinars and courses for ARRL members. Webinars are often downloaded and used as club presentations. Courses are contained in three broad topics — EmComm, On The Air,



Top left: The Learning Center offers courses for hams at all levels of experience and skill

Above: Our end-fed half-wave antenna kit has helped many hams get on the air!

Left: Thanks to everyone who bid in the 2021 ARRL Online Auction!

and Electronics and Technology. Between October and December 31, 2021, 3,646 users registered on the ARRL Learning Center.

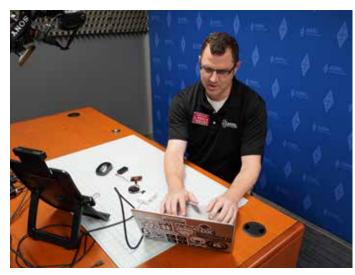
Education and Technology Program Grants

In October 2021, the Education and Technology Program (ETP) awarded two grants — one to Lafayette Middle School in Oxford, Mississippi, and one to Denver





TI instructor Matt Severin, N8MS, gives a Teachers Institute presentation on "Getting Started with Weather Sensors." [Steve Goodgame, K5ATA, photo]



TI instructor Tommy Gober, N5DUX, interacts with attendees in real time during the virtual 2021 Teachers Institute [Steve Goodgame, K5ATA, photo]

Public Schools. Both grant proposals revolved around integrating STEM with amateur radio in the classroom. In 2022, there will be a greater focus on increasing awareness of the grant program among educators.

Curtis McLarty, of Denver Public Schools, thanked ARRL's ETP for the classroom station grant, saying, "Students have been able to see the possibilities that amateur radio offers." McLarty explained he intends to use the rest of the grant for adding a tower, foxhunting experiments, and kit-building projects.

Growing the Teachers Institute

An additional benefit for teachers, ARRL hosted a virtual Teachers Institute (TI) on July 12 – 15, 2021. The TI instructors came to ARRL Headquarters to host the sessions via Zoom. Sessions included basic introductions to electronics, Python, ARISS, and satellites, and much more.

The ETP also focused efforts on growing the TI to further engage youth and marginalized groups in amateur radio. Goodgame said, "Work was started on making amateur radio more accessible to visually impaired hams. A working group of visually impaired hams was formed to help ARRL better understand

the challenges that this population faces, so we could begin coming up with solutions."

Publications and Editorial Department

The Weekly ARRL Letter Now Available in Accessible Format

In spring 2021, ARRL's Publications and Editorial Department began making The ARRL Letter available in an accessible format that is posted weekly to the "Blind-hams Groups.io" email group. The group is dedicated to discussions about amateur radio as it concerns blind hams, plus related topics including ham radio use of adaptive technology.

ARISS Inspires in 2021

Sponsored primarily by NASA, ISS National Lab, and ARRL, the Amateur Radio on the International Space Station (ARISS) program looks to inspire, engage, and educate youth through ham radio. ARRL Representative to ARISS-International Rosalie White, K1STO, said, "For 21 years, ARISS has provided real-time radio contacts for education groups to talk with orbiting ISS crews (ham-licensed). ARISS chooses groups who've designed lessons for students, educators, and their communities to learn about space, technology, and amateur radio."

Adhering to the various COVID-19 protocols of town and cities, ARISS worked to regroup and reconnect. Some classrooms allowed a limited number of students to gather in person, social distancing in gymnasiums or outdoors, while other schools chose to connect students with ISS astronauts via a telebridge radio contact.



Though telebridge contacts might seem as though they lack the individualized experience, White emphasized the significance of these kinds of contacts, connecting multiple schools, the public at large, and the ISS crew. Students saw their classmates on the livestream, along with the public watching at home, including parents and ham radio clubs.

Other successful ARISS projects in 2021 included sponsoring STEM projects for students, hosting an ARRL webinar, attending over 40 conventions and hamfests, and giving a presentation — sanctioned by the White House — to a User Advisory Group Education Committee at a National Space Council meeting. ARISS also supported the first-ever radio contact for a school for the deaf.

White said, "ARISS thanks ARRL for their continued and generous support."

Before or after an ARISS contact, many of the education groups that host the contact ask area amateur radio clubs to hold license classes and teach on-air protocol.

ARRL Volunteer Examiner Coordinator (VEC) Program

The ARRL Volunteer Examiner Coordinator (VEC) continues to maintain its position as the largest VEC in the nation, handling 68% of total amateur radio exams administered.



There has been a heightened interest in acquiring a new or upgraded amateur radio license while the pandemic restricts movement and activities. The availability of remotely proctored video test sessions using online examinations makes it easy for candidates to take amateur radio exams.

New licenses issued increased by 6% with the FCC issuing 31,597 new amateur licenses in 2021, as compared to 2020's total of 29,911. Upgraded license activity improved as well, as seen in the 11,391 FCC-issued upgraded licenses in 2021, up an incredible 24% from 2020. Total FCC license activity rose by 10% over 2021. By the end of 2021 there were 779,924 radio amateurs in the FCC database.

ARRL VEC filed a total of 28,411 license application forms in 2021, compared to 26,712 in 2020. Club license activity dropped slightly in 2021, with 1,222 club license applications filed, as compared to 1,568 in 2020. 261 new club license requests were granted by the FCC.

ARRL served 26,806 exam applicants in 2021, which was down slightly from 2020, but ARRL conducted 8,478 exam sessions in 2021, which outpaced the 7,180 exam sessions conducted in 2020. ARRL-administered exam elements increased from 34,941 in 2020 to 38,439 in 2021.

Online Testing

Since April 2020, thousands of VEs have been trained to conduct video-supervised online exam sessions using a video platform and the ExamTools online examination system. The VEC switched to an online test session model in 2020 in order to keep exams running safely during the pandemic. The online exams can be utilized for in-person sessions as well as the video sessions. In the past 2 years, more than 26,000 applicants have taken online exams (11,829 in 2020 and 14,816 in 2021).

VE teams are still being cautious about giving in-person exams. Those that are happening have had unusually low attendance due to candidates canceling their spot after testing positive for COVID. Some teams never restarted testing in their areas because they prefer in-person testing over the video option. Others continue to evaluate whether further exam sessions will be possible depending upon COVID conditions and availability of safe/suitable testing locations.

For in-person examinations, many of our teams are requiring proof of being vaccinated or having a negative COVID test within the last 72 hours to attend the session. Lack of available COVID tests also impacted in-person testing in 2021.

Despite the reduced in-person licensing activity over the past 2 years, 1,891 new VEs joined our program, resulting in a total of 27,406 accredited ARRL VEs. In our program, three VEs reached the impressive milestone of 3,000 sessions of participation, one reached 2,000 sessions of participation, and six have reached more than 1,000 sessions of participation.

The shift to the ExamTools online examinations system has allowed ARRL VEs to better serve our community. Many teams have

been using the ExamTools online exams or printed exams at in-person sessions. Additionally, ARRL VEC's interactive upload page allows our VE teams to submit electronic documents quickly, easily, and securely. Uploading this way results in quicker FCC processing and significantly less wait time for a license. What might have taken a few weeks in the past is now taking a few days. Our VEC is averaging 100 to 150 uploaded session files (both in-person and remote video) per week.

New Question Pool

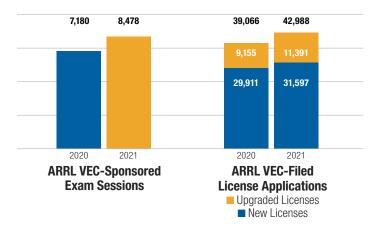
In August 2021, ARRL VEC Manager and National Conference of Volunteer Examiner Coordinators (NCVEC) Vice Chairman Maria Somma, AB1FM, represented our members on the NCVEC Question Pool Committee (QPC), and participated in the review of the new Element 3 General-class question pool, which will take effect in July 2023.

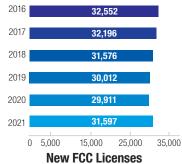
Development

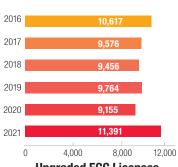
Overall results for Development activities in 2021 were strong. Contributions to support operations reached \$1.14 million — 115% of the overall goal for the year. Estate contributions to the ARRL Endowment and other endowment gifts increased total donor support for the year in excess of \$1.6 million.

Annual Giving

Development worked closely with the Membership, Marketing, and Communications Department to develop new promotional materials aimed at simplifying messaging and driving more personal engagement with donors. Development also contributed content to *The ARRL Current*, a new monthly email to members, throughout the year to promote the many giving opportunities with ARRL. 1,883 unique donors contributed to Development funds in 2021.







Upgraded FCC Licenses





Above: The 2021 Diamond Club challenge coin. Left: Diamond Club coin/stamp display

ARRL Diamond Club

ARRL Diamond Club revenues continued to be strong through the end of 2021, closing the year with \$440.0000 in net revenue and exceeding the 2021 target by more than \$59,000. The number of Diamond Club members increased to 1,580, compared to 1,519 Diamond Club members in 2020. The Diamond Terrace at ARRL continued to grow. with the addition of 84 new bricks in 2021, bringing the total number of inscribed bricks in the Terrace to 2.603.

Two Diamond Club premiums were designed for 2021 — a Diamond Club Challenge Coin and a unique First Day of Issue Cover piece for displaying both the Challenge Coin and a stamp issued by the US Postal Service in December 1964 to honor the ham radio community's emergency communication efforts during the Alaska earthquake that struck earlier that year. Traditionally, the Diamond Club premium has been sent only to new Diamond Club members, but we felt such a special gift should be available to all donors. Based on the response, we considered the offering a success.

ARRL Maxim Society

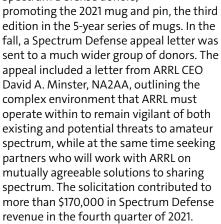
As of the end of 2021, the ARRL Maxim Society had 331 members whose lifetime giving has reached \$10,000 or more. ARRL welcomed 34 new Maxim Society members in 2021.



recognized for achieving higher Maxim Society levels. Eight donors achieved Ambassador Class (lifetime giving of \$25,000-\$49,999), two donors achieved Benefactor Class (lifetime giving of \$50,000-\$99,999) and two donors achieved Founder Class (lifetime giving of \$100,000-\$249,999).

ARRL Spectrum Defense Fund

The Spectrum Defense Fund raised \$256,000 during 2021, falling short of the \$285,000 target. A targeted email was sent in the spring to previous Spectrum Defense donors,



ARRL Education & Technology Fund

The Education & Technology Fund raised \$134,731 during 2021, just shy of the \$145,000 goal, to support ARRL's Teachers Institute. Due to uncertainty stemming from the COVID-19 pandemic,

ARRL had to reimagine a way to deliver the Teachers Institute in 2021. After much discussion and planning, the 2021 Virtual Teachers Institute was born. The Institute was conducted from ARRL HQ, with ARRL's team of four instructors traveling to Newington, Connecticut from across the country, and was delivered virtually to 33 teachers globally. A total of 19 sessions were presented virtually over the course of 4 days.

ARRL Legacy Circle

At the end of 2021, the ARRL Legacy Circle had 122 participants who have included ARRL in their estate plans. In 2021, several estate gifts were realized and



contributed almost \$400,000 to the ARRL Endowment. This amount, together with ongoing pledge fulfillments to the Second Century Campaign and the W1AW Endowment, brought total contributions to the ARRL Endowments in 2021 to more than \$464,000.

Giving Tuesday

Development set a goal to raise \$20,000 in contributions on Giving Tuesday, the global day of giving. That goal was met, with \$20,111 in contributions from 136 donors — an increase over the 2020 Giving Tuesday results of \$10,771 in contributions from 91 donors.

Other Development Activities

ARRL received \$11,000 in charitable donations through the AmazonSmile program in 2021. ARRL has received \$57,000 in cumulative donations since joining the AmazonSmile program in 2014, and there are 4,602 Amazon customers who have chosen ARRL as their charity.



New ARRL Foundation Scholarships Founded in 2021

In 2021, the ARRL Foundation established seven new scholarships, which will each be awarded annually beginning in 2022, except where noted.

The CWops Scholarship is open to licensed amateur radio operators attending a fully accredited educational institution of higher learning or a fully accredited trade, art, or professional school. Applicants must demonstrate CW operating ability within the last 24 months by providing a copy of a certificate, listing in a magazine showing results, or a letter from a person responsible for membership. The award will be \$1,000 annually.

The Ronald Hesselbrock, WA8LOW, Memorial Scholarship is available to applicants holding a valid amateur radio license of any class for a minimum of 1 year prior to the application date. Applicant must have been a member of ARRL for a minimum of 1 year prior to the application date and must demonstrate that they are active in amateur radio by submitting a letter from an amateur radio club officer or from an official in the ARRL Field Service organization verifying their activity. The scholarship award will be \$10,000 annually.

The Maryland Military Auxiliary Radio System, Inc. (MMARSI) Scholarship provides financial assistance to amateur radio operators pursuing higher education in the field of Communications Technology. Applicants must reside in the state of Maryland; if no qualified applicant is identified within Maryland, preference will be given to qualified applicants from the states of Virginia, Delaware, and the District of Columbia. Preference will be given to amateur radio operators who show evidence of demonstrated activity with the several amateur emergency communications programs such as MARS, ARES, and RACES. Two scholarships of \$2,000 each will be awarded annually.

The Robert A. Rodriguez, K5AUW,

Scholarship is open to applicants holding a current FCC amateur radio license attending an accredited 2- or 4-year university, college, or technical school with preference given to those pursuing studies in electrical engineering, electronics engineering, computer engineering, electrical technology, electronics technology, or computer technology. Preference for the two annual scholarships of \$1,000 each will be given first to residents in the ARRL South Texas Section, then to residents in the state of Texas, and lastly to residents in the ARRL West Gulf Division.

The Steel City ARC Scholarship is available to applicants holding a valid FCC amateur radio license of any class. Preference will be given to applicants from the ARRL Western Pennsylvania Section of the Atlantic Division pursuing studies in science, technology, engineering, or math (STEM). The first annual scholarship of \$1,000 will be awarded in 2023.

The Michael R. Ware, NN3I, Scholarship is open to applicants holding a current FCC General-class license granted 2 years or more before application submission, or holding a current FCC Amateur Extra-class license. Applicants must be majoring in any of the STEM (science, technology, engineering, or math) disciplines with a current cumulative GPA of 3.0 out of a 4.0 scale. The \$2,000 annual scholarship will be awarded to an applicant with proven financial need.

The John C. York, KE5V, Scholarship provides funding for the educational expenses of a young amateur radio operator holding a Technician-class or higher amateur radio license. Preference will be given to undergraduate students and those in certificate programs, but graduate students may apply. Applicants must be pursuing a field of study leading to a career in the healing arts, including but not limited to a career in medicine, nursing, dentistry, pharmacy, EMT, or radiology. Applicants should describe how they have engaged in volunteer and/or public service activities making use of amateur radio and, if possible, should show a desire to encourage others in the healing arts to become licensed hams. The award will be \$1,000 annually.

ARRL Foundation Grant Awards Made in 2021

The Amateur Radio Club of Columbia County, located in Evans, Georgia, received a grant of \$805 to support the expansion of their HAM 101 program, which fosters interest in amateur radio, teaches amateur radio-related concepts, and supports youth understanding of school subjects and recognition of their potential real-world applications. The initial pilot program was a success, and due to coverage in local media and expressed support from teachers and parents, the ARCCC anticipates an increase in student enrollment in HAM 101.

ARISS-USA in Towson, Maryland, is launching a 2-year program named the ARISS *STAR* Keith Pugh (*STAR* — Space Telerobotics using Amateur Radio). Through the STEM education program, university faculty and undergrads will undertake hands-on radio and robot lessons, learn about amateur radio, then develop and operate engineering hardware and software and engage with ARISS radios on the ISS. This will lead to *STAR* youth teams trying hands-on robot and radio lessons and learning about the advantages of an amateur radio license. ARISS-USA received a grant in the amount of \$47,533 to help fund the first year of the project.

The Briarcrest Amateur Radio Club of Eads, Tennessee received a \$3,000 grant to support the launch of an amateur radio club at Briarcrest Christian School. The funding will be used for the equipment needed to establish a base station and to get the club off the ground.

The Civil Air Patrol Squadron 131, located in Eloy, Arizona, is part of the Eloy Elementary School District STEM program. The squadron was awarded a grant in the amount of \$317 to support expanding their STEM offerings into amateur radio.

Comunidad del Bo. Quebradas, Inc., located in Yauco, Puerto Rico, will offer an amateur radio course of theory to obtain an amateur radio license and will be complemented with simple projects applying basic electronics, radio science, and other sources in today's technologies to encourage the interest of the participants. The club received a \$3,000 grant for training materials and equipment for the course, as well as licensing fees.

The Miami County Amateur Radio Club in

Peru, Indiana received a \$3,000 grant to put together six complete soldering kids. These kits will allow up to 12 club members to participate in hands-on electronics projects at club tech nights to encourage the electronics and science side of amateur radio.

The Minsi Trails Council, Boy Scouts of America, located in Lehigh Valley. Pennsylvania, was awarded a \$1,000 grant to develop a ham radio awareness program at Scout Camp Minsi in Pocono Summit, Pennsylvania. The project included building out a functioning radio station including a 40-foot hinged crank-up tower, a repurposed storage room as the radio shack, and

instructional/demonstration area and

expanding existing Wi-Fi coverage.

The Sussex County Charter School for Technology in Sparta, New Jersey, requested funding for equipment and activities in support of establishing the school's first amateur radio club, KD2YAQ. The school received a \$1,500 grant to purchase equipment, assist with installation and minor facilities modifications, support training and training materials for licensing, and to defray the cost of license exam fees for student applicants.

Katherine Forson, KT5KMF, Wins 2021 **Hiram Percy Maxim Award**

The ARRL Board conferred the 2021 ARRL Hiram Percy Maxim Award, on Katherine M. Forson, KT5KMF, of Plano, Texas. A Technician in 2013 at the age of 9, a General in 2017, and an Amateur Extra in 2018, Katherine's enthusiasm resulted in her appointment as the North Texas Section Youth Coordinator in 2019. ARRL's top youth honor, the Hiram Percy Maxim Memorial Award is given annually to radio amateur and ARRL member under the age of 21. The award consists of a \$1,500 cash award and an engraved plaque.

Forson is an active member of the Plano Amateur Radio Klub and Collin County RACES, and a trained National Weather Service SKYWARN Storm Spotter; she has been profiled as a QST "Member Spotlight," participates as an amateur radio operator in public service events such as the Plano Balloon Festival, and is currently working with several other female members of the ARRL North Texas Section to help build a female-friendly area of the ARRL NTX Section website.



Katherine Forson, KT5KMF, winner of the 2021 Hiram Percy Maxim Award.

ARRL Foundation Received Grant from Amateur Radio Digital Communications to Begin Club Grant Program

ARRL has long recognized that it is in the best interests of amateur radio to encourage and support amateur radio clubs. Clubs have historically recruited, licensed, and trained new radio amateurs and have provided the community setting for radio amateurs to continue their education and training. The ARRL Foundation Club Grant Program, funded by a grant from Amateur Radio Digital Communications (ARDC), will make \$500,000 available to clubs, enabling them to provide and expand these important services more easily. The program will provide up to \$25,000 for club projects.



Legacy Circle Members

The ARRL Legacy Circle recognizes individuals who have provided for ARRL in their wills or other estate plans. Gifts received in this capacity — unless otherwise designated — provide unrestricted revenue to be used wherever resources are most needed, either through the ARRL Endowment or to assist in offsetting operational costs.

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Carl Luetzelschwab, K9LA; Scott Yonally,

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Financial Summary

ARRL had a successful financial year in 2021 and produced a \$979,000 gain from operations with both total revenues and expenses down in comparison to the prior year. Continued support in the form of voluntary contributions and estate bequests coupled with increases in the value of ARRL's investment portfolio and the forgiveness of the Federal Paycheck Protection Loan, resulted in an overall increase of \$3.82 million in the organization's net assets.

ARRL membership at the end of 2021 remained relatively flat with 158,601 members compared to 158,494 members at the end of 2020. Growth in membership is essential to the organization's continued success. Dues revenue remains the largest revenue source for the organization, at \$6.7 million or 43% of operational revenue for the year.

ARRL publications and product sales represented the second largest revenue source for ARRL. Although revenue from publication sales fell to \$3.53 million in 2021, a decrease of 9% in comparison to the prior year, it has returned to a pre-pandemic level.

Advertising sales was an area that quickly saw a decrease due to the pandemic and has struggled to return to pre-pandemic levels. Among other things, supply chain issues for advertisers have limited their ability and need to advertise. Sales of advertising across the various ARRL platforms remained relatively flat at \$1.6 million in 2021.

The investment markets, once again, proved to have a significant positive impact on our financial position in 2021. Interest, dividends, and realized gains contributed \$1.5 million to ARRL revenues in 2021, up by 25% from the previous year. ARRL's realized investment earnings are becoming an important revenue stream in covering operational expense on a regular basis. The investment portfolio also added an additional \$1 million of unrealized gains to the financial position of the organization.

Revenue from license examination activities contributed \$368,000 in revenue to the organization, 11% higher than in 2020 as in person exam sessions started to return in 2021. Program and service fees contributed \$542,000 in revenue during 2021, up 2% from the prior year.

Dedicated members have continued their generous support of the organization through voluntary contributions both with and without donor restrictions. A total of \$1.7 million was contributed in 2021, with almost \$400,000 coming from bequests.

Expenses in 2021 were \$380,000 or 3% lower in 2021 than in the prior year. The lower spending was a result of positions remaining vacant longer than expected due to the difficult employment market. Total expenditures across the organization stood at \$14.57 million, down from \$14.95 million in 2020.

Total assets for the organization stood at \$43.7 million at the end of 2021, up from \$40.3 million at the end of 2020. Of these totals, cash and investments totaled approximately \$39.7 million at year end compared to \$36.7 at the end of 2020. The investment portfolio supports the various unrestricted and restricted funds in addition to the long-term liability represented by the Life Member program. Net assets increased to \$29.6 as of December 31, 2021, from \$25.8 million a year earlier. Over half of this increase was driven by the impact of the investment markets on the value of ARRL's investment portfolio and the forgiveness of the Federal Paycheck Projection Program Loan.

In summary, ARRL's financial condition continues to be solid and provides a strong financial foundation for the organization. This stable financial position is necessary to provide the resources for ARRL to maintain its infrastructure while meeting the evolving needs, desires, and demands of the amateur radio community, today and tomorrow. The challenge will be to meet these demands and create additional value to drive membership growth, ensuring the future success of ARRL.



Independent Auditor's Report

To the Board of Directors The American Radio Relay League, Incorporated

Opinion

We have audited the financial statements of The American Radio Relay League, Incorporated, which comprise the statements of financial position as of December 31, 2021 and 2020, and the related statements of activities, functional expenses, and cash flows for the years then ended, and the related notes to the financial statements.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of The American Radio Relay League, Incorporated as of December 31, 2021 and 2020, and the changes in its net assets and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America ("GAAS"). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of The American Radio Relay League, Incorporated and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about The American Radio Relay League, Incorporated's ability to continue as a going concern for one year after the date that the financial statements are available to be issued.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal

control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of The American Radio Relay League, Incorporated's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about The American Radio Relay League, Incorporated's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audits.

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements as a whole. The schedules of restricted funds for time and purpose summary are presented for purposes of additional analysis and are not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the financial statements as a whole.

> CohnReynick ZZ Hartford, Connecticut May 11, 2022

Statements of Financial Position December 31, 2021 and 2020

<u>Assets</u>

	2021	2020
Current assets		
Cash	\$ 1,992,047	\$ 1,479,130
Accounts receivable, net of allowance for doubtful		
accounts of \$57,424 and \$60,148 for 2021 and 2020	244,252	304,105
Inventories, net	402,390	418,725
Contributions receivable, current	143,713	158,688
Other receivables	413,620	96,816
Prepaid expenses and other current assets	420,292	429,765
·		
Total current assets	3,616,314	2,887,229
Other assets		
Investments	37,684,306	35,217,139
Long-term contributions receivable, net of discount and		
allowance of \$139,719 and \$189,321 for 2021 and 2020	281,281	294,179
Land, building and equipment, net	2,164,761	1,868,990
Total other assets	40,130,348	37,380,308
		. ,
Total assets	\$ 43,746,662	\$ 40,267,537

Statements of Financial Position December 31, 2021 and 2020

Liabilities and Net Assets

	2021	2020
Current liabilities Accounts payable Accrued liabilities Deferred revenue Refundable advance - PPP Loan	\$ 402,058 655,270 85,337	\$ 362,727 601,771 123,035 1,048,864
Subtotal operational current liabilities Deferred life membership dues, current Deferred term membership dues, current	1,142,665 620,392 3,480,603	2,136,397 507,665 3,259,577
Total current liabilities	5,243,660	5,903,639
Long-term liabilities Deferred life membership dues, less current portion Deferred term membership dues, less current portion Total long-term liabilities Total liabilities	7,918,034 982,905 8,900,939 14,144,599	7,642,358 940,468 8,582,826 14,486,465
Commitments		
Net assets Without donor restrictions Undesignated Board designated	6,021,275 14,307,138	4,605,957 12,386,709
Total without donor restrictions With donor restrictions	20,328,413 9,273,650	16,992,666 8,788,406
Total net assets	29,602,063	25,781,072
Total liabilities and net assets	\$ 43,746,662	\$ 40,267,537

Statement of Activities Year Ended December 31, 2021

	ithout donor	Vith donor estrictions	Total
Revenues and contributions Membership dues Net publication sales Advertising Investment income Examination fees and other Program and service fees Contributions and support Net assets released from restrictions	\$ 6,724,700 3,529,659 1,617,421 1,112,595 368,057 541,502 801,818	\$ - - 397,828 - - 456,827 (617,482)	\$ 6,724,700 3,529,659 1,617,421 1,510,423 368,057 541,502 1,258,645
	15,313,234	237,173	15,550,407
Expenditures Programs and services Publications Administration Fundraising	7,826,116 3,339,390 2,939,780 465,963 14,571,249	 - - - - -	 7,826,116 3,339,390 2,939,780 465,963 14,571,249
Increase in net assets before other income (expense)	741,985	237,173	979,158
Other income (expense) Bequests, Board designated functioning as an endowment Second Century Campaign endowment contributions Unrealized gain on investments Contributions - PPP loan forgiveness Contributions - Employee retention tax credit	399,951 - 814,947 1,048,864 330,000 2,593,762	 - 20,807 227,264 - - - 248,071	399,951 20,807 1,042,211 1,048,864 330,000 2,841,833
Change in net assets	3,335,747	485,244	3,820,991
Net assets, beginning	16,992,666	8,788,406	 25,781,072
Net assets, end	\$ 20,328,413	\$ 9,273,650	\$ 29,602,063

See Notes to Financial Statements.

Statement of Activities Year Ended December 31, 2020

	Without donor restrictions	With donor restrictions	Total
Revenues and contributions Membership dues Net publication sales Advertising Investment income Examination fees and other Program and service fees Contributions and support Net assets released	\$ 6,773,387 3,870,443 1,601,483 867,695 331,084 531,551 745,938	\$ - - 343,972 - - 895,547	\$ 6,773,387 3,870,443 1,601,483 1,211,667 331,084 531,551 1,641,485
from restrictions	954,998	(954,998)	-
	15,676,579	284,521	15,961,100
Expenditures Programs and services Publications Administration Fundraising	8,143,370 3,250,446 3,173,593 384,379	- - - -	8,143,370 3,250,446 3,173,593 384,379
	14,951,788_		14,951,788
Increase in net assets before other income	724,791	284,521	1,009,312
Other income Bequests, Board designated functioning as an endowment Second Century Campaign	888,459	-	888,459
endowment contributions Unrealized gain on investments Loss on disposal of software costs	566,904 (409,560)	38,950 163,102 	38,950 730,006 (409,560)
	1,045,803	202,052	1,247,855
Change in net assets	1,770,594	486,573	2,257,167
Net assets, beginning	15,222,072	8,301,833	23,523,905
Net assets, end	\$ 16,992,666	\$ 8,788,406	\$ 25,781,072

Statement of Functional Expenses Year Ended December 31, 2021 (with Comparative totals for 2020)

		Program	ط	Publications	Ad	Administrative	H _D	Fundraising		2021		2020
Salaries, compensation and benefits Publication costs Shipping and forwarding costs Communication and postage Other Occupancy costs Office supplies and expenditures Legal and professional fees Governance Travel Depreciation Rentals and equipment maintenance	↔	4,034,011 910,070 888,423 353,797 128,927 203,247 260,168 549,613 80,562 31,698 124,421 261,179	↔	1,331,692 952,626 581,785 100,884 893 85,261 44,469 123,748 - 957 27,693 89,382	↔	1,593,296 274 - 34,619 366,791 279,949 27,781 27,781 203,519 196,325 4,730 90,894 141,602	₩	275,307 2,318 - 37,740 54,911 7,971 33,574 31,042 - 270 6,388 16,442	↔	7,234,306 1,865,288 1,470,208 527,040 551,522 576,428 365,992 907,922 276,887 37,655 249,396 508,605	↔	7,682,299 1,908,711 1,416,878 498,248 825,209 547,993 286,585 786,125 244,451 64,378 240,205 450,706
Total	S	7,826,116	\$	3,339,390	s	2,939,780	\$	465,963	↔	14,571,249	s	14,951,788

See Notes to Financial Statements.

Statement of Functional Expenses Year Ended December 31, 2020

2020	\$ 7,682,299 1,908,711 1,416,878 498,248 825,209 547,993 286,585 786,125	64,378 240,205 450,706	\$ 14,951,788
l l	53 55 5 73 055 1	္က ္က ္လ	္မ [
Fundraising	272,112 3,736 31,735 23,925 7,570 20,363 5,011	1,580 5,369 12,978	384,379
-	↔		↔
Administrative	1,848,383 149 - 38,626 372,103 265,814 27,043 202,082	6,720 84,031 147,105	3,173,593
Ad	₩		S
Publications	1,292,430 993,239 607,882 105,216 1,268 79,945 30,311	5,634 23,727 63,251	3,250,446
ط	↔		s
Program	4,269,374 911,587 808,996 322,671 427,913 194,664 208,868 531,489	50,444 127,078 227,372	8,143,370
	↔		S
	Salaries, compensation and benefits Publication costs Shipping and forwarding costs Communication and postage Other Occupancy costs Office supplies and expenditures Legal and professional fees Governance	Travel Depreciation Rentals and equipment maintenance	Total

See Notes to Financial Statements.

Statements of Cash Flows Years Ended December 31, 2021 and 2020

		2021		2020
Cash flows from operating activities	•	0.000.004	Φ.	0.057.407
Change in net assets	\$	3,820,991	\$	2,257,167
Adjustments to reconcile change in net assets to net				
cash provided by operating activities		()		
Receipts to establish or increase perpetual endowment funds		(36,622)		(104,198)
Depreciation		249,396		240,205
(Gain) loss on sale of equipment		3,896		411,431
Discount and allowance for accounts receivable		11,420		42,216
Discount and allowance for contributions receivable		(49,602)		(4,678)
Change in inventory reserve		22,056		(30,563)
PPP loan forgiveness		(1,048,864)		-
Unrealized gain on investments		(1,042,211)		(730,006)
Realized gain on investments allocated				
to general and perpetual funds		(724,233)		(545,376)
Changes in operating assets and liabilities				•
Accounts receivable		48,433		(34,489)
Inventories		(5,721)		241,090
Contributions receivable		77,475		(10,475)
Other receivables		(316,804)		33,385
Prepaid expenses and other current assets		9,473		(65,783)
Accounts payable and accrued liabilities		92,830		34,400
Deferred revenue		(37,698)		(6,790)
Refundable advance		(37,030)		1,048,864
		_		1,040,004
Deferred life membership dues, net of allocated		01 620		28,027
realized gain		81,638		•
Deferred term membership dues		263,463		121,254
Net cash provided by operating activities		1,419,316		2,925,681
Cash flows from investing activities				
Purchase of equipment		(549,063)		(876,571)
Sales of investments		13,904,219		8,896,831
Purchases of investments		(14,298,177)		(10,911,105)
Purchases of investments		(14,290,177)		(10,911,105)
Net cash used in investing activities		(943,021)		(2,890,845)
Cash flows from financing activities				
Receipts to establish or increase perpetual endowment funds		36,622		104,198
				- ,
Net increase in cash		512,917		139,034
Cash, beginning		1,479,130		1,340,096
Cash, end	\$	1,992,047	\$	1,479,130

See Notes to Financial Statements.

Notes to Financial Statements December 31, 2021 and 2020

Note 1 - Organization and summary of significant accounting policies

Nature of activities

The American Radio Relay League, Incorporated (the "League") is a not-for-profit organization formed to promote interest in amateur radio communication, experimentation and the advancement of radio art, further the public welfare and foster education in the field of electronic communication. The League also publishes documents, books, magazines and pamphlets necessary or incidental to its purpose. The League's operations are primarily supported by membership dues, publication sales, advertising and contributions. The League's members are primarily located throughout the United States.

Basis of presentation

The accompanying financial statements of the League have been prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America ("GAAP"). The League reports information regarding its financial position and activities according to the following net asset categories:

Net assets without donor restrictions

Net assets without donor restrictions represent available resources other than donor-restricted contributions. Included in net assets without donor restrictions are funds that may be earmarked for specific purposes.

Net assets with donor restrictions

Net assets subject to donor- (or certain grantor-) imposed restrictions are temporary in nature, such as those that will be met by the passage of time or other events specified by the donor. Other donor-imposed restrictions are perpetual in nature, where the donor stipulates that resources be maintained in perpetuity.

Cash and cash equivalents

Cash and cash equivalents include all cash balances and highly liquid short-term instruments with an original maturity of three months or less when acquired. Temporary cash and cash equivalent balances associated with investment accounts are included with investments in these financial statements. There were no cash equivalents as of December 31, 2021 and 2020 included in operating cash.

Allowance for doubtful accounts

Trade accounts receivable is stated at the amount management expects to collect from outstanding balances. The League performs on-going credit evaluations of its customers' financial condition and grants credit based on each customer's ability to pay. The League evaluates the need for an allowance for doubtful accounts based upon factors surrounding the credit risk of specific customers. historical trends and other information.

Contributions receivable

Contributions receivable are recorded at their net realizable value, which approximates fair value. Receivables that are expected to be collected in future years are discounted to their present values.

Inventories

Inventories consist of publications, software, membership supplies and other miscellaneous items. Inventories are stated at the lower of cost or market. Cost is determined by the first-in, first-out (FIFO) method. Inventories are reflected net of reserves for slow moving inventory of \$88,724 and \$66,668 as of December 31, 2021 and 2020, respectively.

Notes to Financial Statements December 31, 2021 and 2020

Investments

The League reports investments at fair value (see Note 5) and reflects any gain or loss in the statements of activities. Investment income and gains and losses are considered to be without donor restriction unless restricted by donor stipulation or by operation of law.

Land, building and equipment

The League capitalizes expenditures for building and equipment with a useful life of greater than one year and a cost of \$1,000 or more. Purchased land, building and equipment are carried at cost less accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful life of the asset. Estimated lives for financial reporting purposes are as follows:

	Estimated useful
Asset	lives
Building	40 years
Furnishings, equipment and building	3 - 15 years
Computer software	3 - 5 years

Expenditures for repairs and maintenance are charged to expense as incurred. For assets sold or otherwise disposed of, the cost and related accumulated depreciation are removed from the accounts and any resulting gain or loss is reflected in change in net assets for the period.

The League reviews its long-lived assets for impairment using an undiscounted cash flow method whenever events or circumstances indicate the carrying value of an asset may not be recoverable. There were no impairment losses related to long-lived assets as of December 31, 2021 and 2020.

Endowment and spending policy

The League adheres to investment and spending policies for endowment assets that attempt to provide a predictable stream of funding to programs supported by its endowment while seeking to maintain the purchasing power of the endowment assets. Endowment assets include those assets of donor-restricted funds that the League must hold in perpetuity as well as board-designated funds. Under this policy, as approved by the Board of Directors, the endowment assets are invested in accordance with sound investment practices that emphasize long-term investment fundamentals. It is recognized that short-term market fluctuations may cause variations in account performance and investment balances.

To satisfy its long-term rate of return objectives, the League relies on a total return strategy in which investment returns are achieved through both capital appreciation (realized and unrealized) and current yield (interest and dividends). The League targets a diversified asset allocation to achieve its long-term return objectives within prudent risk constraints.

The League appropriates funds for distribution based on an annual review of investment results and available net assets. The League's objective is to maintain the purchasing power of the endowment assets held in perpetuity or for a specified term as well as to provide additional real growth through new gifts and investment return.

Revenue recognition

Revenue is recognized when control of the promised goods or services is transferred to the League's customers (participants and members), in an amount that reflects the consideration expected to be entitled in exchange for those goods or services.

Notes to Financial Statements December 31, 2021 and 2020

Membership dues - Revenue from term membership dues is recognized to the extent of acquisition costs when memberships are received. The remaining portion is recognized as revenue on the straight-line basis ratably over the applicable membership period.

The by-laws of the League provide for a life membership dues rate that equals 25 times the term membership annual dues rate. Life member dues are deferred upon receipt. Investment earnings on allocated life member investments are deferred. Revenue is recognized at an amount representative of the estimated cost to the League for providing services to the life members.

Publication sales - Revenue from publication sales is recognized when the earnings process is complete and the risks and rewards of ownership have transferred to the customer, which is generally considered to have occurred upon shipment of the publication.

Advertising - Advertising revenue is recorded during the period in which the advertisements are published.

Contributions and bequests - Transactions where the resource provider often receive value indirectly by providing a societal benefit, although the societal benefit is not considered to be of commensurate value, are deemed to be contributions. Contributions are classified as either conditional or unconditional. A conditional contribution is a transaction where the League has to overcome a barrier or hurdle to be entitled to the resource and the resource provider is released from the obligation to fund or has the right of return of any advanced funding if the League fails to overcome the barrier. The League recognizes the contribution revenue upon overcoming the barrier or hurdle. Any funding received prior to overcoming the barrier is recognized as refundable advance. Unconditional contributions are recognized as revenue and receivable when the commitment to contribute is received.

Conditional and unconditional contributions are recorded as either with donor restriction or without donor restriction. Contributions are recognized as contributions with donor restrictions if they are received with donor stipulations that limit the use of the donated asset. Contributions received with no donor stipulations are recorded as contributions without donor restrictions. When a donor restriction expires, that is, when a stipulated time restriction ends or purpose restriction is accomplished, net assets with donor restrictions are reclassified as net assets without donor restrictions and are reported in the statements of activities and changes in net assets as net assets released from restriction. Donor-restricted contributions whose restrictions expire during the same fiscal year are recognized as contribution without donor restrictions.

Income taxes

The League is exempt from federal income taxes under Section 501(c)(3) of the Internal Revenue Code. However, the League is subject to federal and state income tax as a result of unrelated business income arising from net advertising income. There are no unrelated business income tax liabilities for the years ended December 31, 2021 and 2020.

The League's federal information returns prior to calendar year 2018 are closed and management continually evaluates expiring statutes of limitations, audits, proposed settlements, changes in tax law and new authoritative rulings. The League recognizes interest and penalties associated with uncertain tax positions as part of the income tax provision and includes accrued interest and penalties with the related tax liability in the statements of financial position. The League has no unrecognized tax positions at December 31, 2021 and 2020.

Notes to Financial Statements December 31, 2021 and 2020

Functional expenses

The financial statements report certain categories of expenses that are attributed to more than one program or supporting function. Therefore, expenses require allocation on a reasonable basis that is consistently applied. The expenses that are allocated include occupancy, which is allocated on a square footage basis, as well as salaries and wages, benefits, payroll taxes, professional services, office expenses, information technology, interest, insurance, and other, which are allocated on the basis of estimates of time, effort, and utilization.

Use of estimates

The preparation of the financial statements in conformity with GAAP requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

Reclassifications

Certain prior year information has been reclassified to conform to the current year presentation.

Subsequent events

The League has evaluated events and transactions for potential recognition or disclosure through May 11, 2022, which is the date the financial statements were available to be issued.

Note 2 - Liquidity

The League regularly monitors liquidity required to meet its annual operating needs and other contractual commitments while also striving to maximize the return on investment of its funds not required for annual operations. As of December 31, 2021 and 2020, the League has the following financial assets available to meet annual operating needs for the subsequent calendar year:

	2021		 2020
Cash Accounts receivable Investments available for operations Other receivable	\$	1,992,047 244,252 1,717,385 413,620	\$ 1,479,130 304,105 1,512,813 96,816
Total	\$	4,367,304	\$ 3,392,864

These financial assets are not subject to any donor or contractual restrictions.

The League supports its general operations primarily with membership dues, advertising, publications and program fees, as well as contributions without donor restrictions and donor restricted funds whose time or purpose restriction has been met. In addition, the Board may appropriate a portion of the earnings as needed from the League's donor-restricted endowment as described in Note 10.

The League's Investment Policy Statement requires the investment portfolio to maintain liquid instruments within its portfolio to ensure assets are available to meet general expenditures, liabilities and other obligations as they come due. The League's management may withdraw from the investments available for operations up to 3% in 2021 and 2020, of the average of the prior two fiscal year end market values of the regular portfolio. In addition, management may draw from the portfolio the annual cost of the life member annual dues amount for each life member. The estimate of these two amounts is approximately \$1.7 million and \$1.5 million as of December 31, 2021 and 2020, respectively. Amounts withdrawn in excess of that amount require approval by the League's

Notes to Financial Statements December 31, 2021 and 2020

administration and finance committee. The League's administration and finance committee reviews investment performance and considers near-term liquidity needs on a quarterly basis.

The Board may also appropriate amounts currently reported as board designated to be available as needed. The Board designates beguests without donor restriction over \$50,000 to the boarddesignated endowment.

Note 3 - Contributions receivable

Unconditional contributions receivable to be collected as of December 31, 2021 and 2020, are expected to be realized in the following periods:

	 2021	2020
In one year or less In one to five years In more than five years	\$ 143,713 151,000 270,000	\$ 158,688 183,500 300,000
Total contributions receivable	564,713	642,188
Less allowance for uncollectible contributions receivable Less discount	(47,222) (92,497)	 (50,318) (139,003)
Total	\$ 424,994	\$ 452,867

Amounts are shown in the statements of financial position as of December 31 as follows:

	2021		2020
Current Long-term	\$ 143,713 281,281	\$	158,688 294,179
Total	\$ 424,994	\$	452,867

Contributions receivable expected to be received in more than one year have been discounted using a discount rate of 3.25% at December 31, 2021 and 2020.

Notes to Financial Statements December 31, 2021 and 2020

Note 4 - Investments

Investments are carried at their aggregate fair value. The following summarizes the relationship between the cost and fair values as presented in the financial statements as of December 31, 2021 and 2020:

	2021		20	20		
		Fair value	Cost	Fair value		Cost
Cash and cash equivalents Equities and mutual funds Fixed maturities	\$	1,076,182 26,843,994 9,764,130	\$ 1,076,182 19,309,576 9,466,090	\$ 2,223,033 20,104,978 12,889,128	\$	2,223,033 14,020,106 12,183,753
Total	\$	37,684,306	\$ 29,851,848	\$ 35,217,139	\$	28,426,892

The League allocates its investments into categories related to life memberships, regular operations, donor restricted and endowment funds. The following summarizes the fair value of investments by category as of December 31, 2021 and 2020:

	2021	 2020
Life membership Regular operations Donor restricted for time and purpose Functioning as an endowment	\$ 8,538,426 5,565,092 4,432,385 14,307,138	\$ 8,112,523 5,929,501 3,983,763 12,386,709
Donor restricted in perpetuity	4,841,265	4,804,643
Total	\$ 37,684,306	\$ 35,217,139

The following summarizes changes in relationships between cost and fair values of investments:

	2021	2020
Unrealized appreciation, beginning Fair value Cost	\$ 35,217,139 28,426,892	\$ 31,726,591 25,666,350
Net gain	6,790,247	6,060,241
Unrealized appreciation, end Fair value Cost	37,684,306 29,851,848	35,217,139 28,426,892
Net gain	7,832,458	6,790,247
Net unrealized gain for the year	\$ 1,042,211	\$ 730,006

Notes to Financial Statements December 31, 2021 and 2020

Investment income is summarized as follows for the years ended December 31, 2021 and 2020:

	2021		 2020
Interest and dividend income Net realized gain on investments	\$	755,213 1,373,558	\$ 668,120 1,088,829
Gross investment income Less		2,128,771	1,756,949
Net investment income allocated to deferred life liability		(618,348)	(545,282)
Total investment income	\$	1,510,423	\$ 1,211,667

Note 5 - Fair value measurements

The League values its financial assets and liabilities based on the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. In order to increase consistency and comparability in fair value measurements, a fair value hierarchy that prioritizes observable and unobservable inputs is used to measure fair value into three broad levels, which are described below:

- Quoted prices (unadjusted) in active markets that are accessible at the measurement Level 1: date for identical assets or liabilities. The fair value hierarchy gives the highest priority to Level 1 inputs.
- Level 2: Observable inputs other than Level 1 prices such as quoted prices for similar assets or liabilities; quoted prices in inactive markets or model-derived valuations in which all significant inputs are observable or can be derived principally from or corroborated with observable market data by correlation or other means. If an asset or liability has a specified (contractual) term, the Level 2 input must be observable for substantially the full term of the asset or liability.
- Level 3: Unobservable inputs are used when little or no market data is available. The fair value hierarchy gives the lowest priority to Level 3 inputs.

In determining fair value, the League utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible as well as considers counterparty credit risk in its assessment of fair value.

Notes to Financial Statements December 31, 2021 and 2020

Financial assets carried at fair value at December 31, 2021 and 2020, are classified in the tables below in one of the three categories described above:

	2021				
	Level 1	Level 2	Level 3	Total	
Money market fund	\$ 1,076,182	\$ -	\$ -	\$ 1,076,182	
Mutual funds					
Large blend fund	17,645	-	-	17,645	
Large growth fund	562,431	-	-	562,431	
World large stock fund	284,593	-	-	284,593	
Foreign large growth fund	212,997			212,997	
Total mutual funds	1,077,666			1,077,666	
Exchange traded funds					
Small blend	1,751,117	-	-	1,751,117	
Mid cap blend	109,860	-	-	109,860	
Large blend	15,636,698	-	-	15,636,698	
Inflation-protected bond	377,340	-	-	377,340	
Foreign large blend	831,228	-	-	831,228	
Equity energy	116,415	-	-	116,415	
Commodities precious metals	209,426	-	-	209,426	
Consumer defense	67,590	-	-	67,590	
Health	372,988	-	-	372,988	
Utilities	357,900	-	-	357,900	
Technology	290,854	-	-	290,854	
Immediate-term bonds	108,309	-	-	108,309	
Diversified emerging markets	121,260	-	-	121,260	
Foreign large value	247,076	-	-	247,076	
Large growth	1,184,008	-	-	1,184,008	
Consumer cyclical	10,568			10,568	
Total exchange traded funds	21,792,637			21,792,637	
Stocks					
Domestic large cap	3,973,691			3,973,691	
Fixed maturities					
Domestic corporate bonds	-	9,451,644	-	9,451,644	
International developed bonds		312,486		312,486	
Total fixed maturities		9,764,130		9,764,130	
Total assets at fair value	\$ 27,920,176	\$ 9,764,130	\$ -	\$ 37,684,306	

Notes to Financial Statements December 31, 2021 and 2020

	2020			
	Level 1	Level 2	Level 3	Total
Money market fund	\$ 2,223,033	\$ -	\$ -	\$ 2,223,033
Mutual funds				
Mid-cap growth fund	110,265	_	_	110,265
Large blend fund	13,714	_	_	13,714
Large growth fund	772,320	_	_	772,320
World large stock fund	250,477	_	_	250,477
Foreign large growth fund	207,887			207,887
Total mutual funds	1,354,663	. <u> </u>		1,354,663
Exchange traded funds				
Mid cap blend	95,620	-	-	95,620
Large blend	4,141,489	-	_	4,141,489
Short-term bond	1,906,140	_	_	1,906,140
Inflation-protected bond	279,360	-	-	279,360
Foreign large blend	670,594	_	_	670,594
Equity energy	77,790	-	-	77,790
Commodities precious metals	267,631	_	_	267,631
Equity precious metals	108,060	_	_	108,060
Consumer defense	173,920	_	_	173,920
Health	373,818	_	_	373,818
Preferred stock	238,330	_	_	238,330
Utilities	250,800	_	_	250,800
Technology	232,136	_	_	232,136
Immediate-term bonds	519,960	_	_	519,960
Long-term bond	49,338	_	_	49,338
Diversified emerging markets	51,670	_	_	51,670
Option writing	98,460	_	_	98,460
Foreign large value	87,840	_	_	87,840
Large growth	1,965,636	_	_	1,965,636
Consumer cyclical	110,072	_	_	110,072
•				
Total exchange traded funds	11,698,664	<u> </u>		11,698,664
Stocks				
Domestic large cap	6,961,111	-	-	6,961,111
International developed	90,540	<u> </u>		90,540
Total stocks	7,051,651			7,051,651
Fixed maturities				
		40 450 04 4		40 450 044
Domestic corporate bonds	-	12,159,614	-	12,159,614
U.S. Treasury Bills	-	201,626	-	201,626
International developed bonds		527,888		527,888
Total fixed maturities		12,889,128		12,889,128
Total assets at fair value	\$ 22,328,011	\$ 12,889,128	\$ -	\$ 35,217,139

Notes to Financial Statements December 31, 2021 and 2020

Level 1 stocks, mutual funds, exchange traded funds, and money market funds are valued at the daily closing price as reported by the fund. Mutual funds held are open-ended funds that are registered with the Securities and Exchange Commission and are valued at the daily closing price as reported by the fund. These funds are required to publish their daily net asset value and to transact at that price. These financial assets held by the League are deemed to be actively traded. Certificates of deposit are valued at cash values based on the instrument issued plus interest accrued.

The fair value of fixed maturities (Level 2), which consists principally of corporate and international bonds, is estimated using market price quotations (where observable), recently executed transactions or bond spreads of the issuer. If the spread data does not reference the issuer, then data that references a comparable issuer is used. When observable price quotations are not available, fair value is determined based on cash flow models with yield curves or bond spreads.

The preceding is a description of the valuation methodologies used for assets at fair value. There have been no changes in the methodology used at December 31, 2021 and 2020.

The League's policy is to recognize transfers in and transfers out of levels at the actual date of the event or change in circumstances that caused the transfer. There were no transfers in or out of the respective levels during the years ended December 31, 2021 and 2020.

The preceding methods may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, although the League believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

Note 6 - Land, building and equipment

Land, building and equipment, and related accumulated depreciation are comprised of the following at December 31, 2021 and 2020:

	2021	2020
Land and building Furnishings, equipment and building improvements Computer software	\$ 1,094,693 4,785,245 2,421,017	\$ 1,094,693 4,696,846 2,073,306
Less accumulated depreciation	8,300,955 (6,804,423)	7,864,845 (6,750,842)
Construction in progress	1,496,532 668,229	1,114,003 754,987
Total	\$ 2,164,761	\$ 1,868,990

Notes to Financial Statements December 31, 2021 and 2020

Note 7 - 403(b) plan

The League has The ARRL, Inc. 403(b) Pension Plan. Employees are eligible to participate in the plan immediately upon employment. After an employee has worked for six months, the League provides a contribution of 2% of the employee's compensation and will match any elective contributions made by the employee up to the employee's contribution of 4% of their compensation. The match was one dollar for every dollar contributed by the employee in 2021 and 2020. Total employer contributions were \$259,100 and \$298,941 in 2021 and 2020, respectively.

Note 8 - Board-designated net assets

The League's Board of Directors' intent is to treat bequests without donor restrictions over a specific amount as funds functioning as an endowment. Since the beginning of 2004, the League has received bequests in the amount of \$7,968,674. As of December 31, 2021 and 2020, the balance of the bequests, inclusive of investment income and unrealized gains and losses, was \$14,307,138 and \$12,386,709, respectively.

Note 9 - Net assets with donor restrictions

Net assets with donor restrictions as of December 31, 2021 and 2020, were available for the following purposes:

	2021			2020		
Funds restricted for time or purpose Exceptional merit Other specific purposes Education and research	\$	1,574,263 2,167,408 690,714	\$	1,498,058 1,895,252 590,453		
Total funds restricted for time or purpose		4,432,385		3,983,763		
Funds restricted in perpetuity Second Century fund W1AW fund DX Log Archive fund Youth and Education fund Colvin fund Dave Bell, W6AQ fund Snyder Collegiate fund		3,208,853 721,629 229,390 292,189 154,340 134,864 100,000		3,209,892 703,968 229,390 272,189 154,340 134,864 100,000		
Total funds restricted in perpetuity		4,841,265		4,804,643		
Total donor restricted net assets	\$	9,273,650	\$	8,788,406		

In 1993, the League became entitled, as beneficiary, to proceeds from a life insurance policy on one of its members, the Colvin fund. This endowment specifies that the principal is to be maintained in a fund and invested for the purpose of producing future income. The income from this endowment will be expended to reward deserving radio amateurs.

In 2002, an endowment fund was established for W1AW maintenance and upkeep.

Notes to Financial Statements December 31, 2021 and 2020

In 2011, the League started the Second Century Campaign. The principal funds are to be maintained and invested for the purpose of producing future income. The income from the endowment will support creating a path to passionate involvement in amateur radio by new generations, and will thereby provide opportunities for educational enrichments, community service and personal achievement.

In 2012, the League became entitled to a bequest for the Youth and Education fund. This endowment specifies that the principal is to be maintained in a fund and invested for the purpose of producing future income. The income from this endowment will be used to support education and technology initiatives.

In 2014, the League received a donation to establish the DX Log Archive fund. This endowment specifies that the principal is to be maintained in a fund and invested for the purpose of producing future income. The income will fund the creation and management of the DX Log Archive Program for paper DX logs for rare and significant DXpeditions.

In 2015, the League became entitled to a bequest to establish the Dave Bell, W6AQ fund. This fund specifies that the principal is to be maintained in a fund and invested for the purpose of producing future income. The income from this endowment will be used for the League's programs and operations in the best interests of the Amateur Radio Service as determined by the League.

In 2017, the League received a donation to establish the W1YSM Snyder Family Collegiate Amateur Radio Endowment fund. This endowment specifies that the principal is to be maintained in a fund and invested for the purpose of producing future income. The income from this endowment will be used to support the League's Collegiate Amateur Radio Initiative activities.

Note 10 - Endowment

The League's endowment includes both donor-restricted endowment funds and funds designated by the Board of Directors to function as endowments. The donor-restricted funds include the corpus restricted in perpetuity and the net appreciation of the fund. Funds designated by the Board of Directors as restricted to purpose or time are also included in the Organization's endowment and are reported as net assets without donor restrictions. The Board of Directors has interpreted the Connecticut Uniform Prudent Management of Institutional Funds Act ("CTUPMIFA") as requiring the preservation of the fair value of the original gift as of the gift date of the donor-restricted endowment funds absent explicit donor stipulations to the contrary. As a result of this interpretation, the League retains in perpetuity (a) the original value of the initial and subsequent gift amounts (including contributions receivable net of discount and allowance for doubtful accounts donated to the Endowment and (b) any accumulations to the endowment made in accordance with the direction of the applicable donor gift instrument at the time the accumulation is added. Donor-restricted amounts not retained in perpetuity are subject to appropriation for expenditure by use in a manner consistent with the standard of prudence prescribed by CTUPMIFA.

In accordance with CTUPMIFA, the League considers the following factors in making a determination to appropriate or accumulate donor-restricted endowment funds: (1) the duration and preservation of the various funds, (2) the purposes of the League and donor-restricted endowment funds, (3) general economic conditions, (4) the possible effect of inflation and deflation, (5) the expected total return from income and the appreciation of investments, (6) other resources of the League and (7) the League's investment policies.

Notes to Financial Statements December 31, 2021 and 2020

Changes in endowment net assets for the year ended December 31, 2021, are as follows:

		ithout donor restrictions	_	Vith donor estrictions	Total			
Endowment net assets, January 1, 2021		12,386,709	\$	5,981,196	\$	18,367,905		
Investment income, net		1,088,053		306,092		1,394,145		
Net unrealized gain		432,425		174,968		607,393		
Contributions		399,951		36,623		436,574		
Amounts appropriated for expenditure				(241,535)		(241,535)		
Endowment net assets, December 31, 2021		14,307,138	\$	6,257,344	\$	20,564,482		

Endowment net asset composition by type of fund as of December 31, 2021, is as follows:

	 /ithout donor restrictions	Vith donor estrictions	Total			
Donor-restricted endowment funds	\$ -	\$ 6,257,344	\$	6,257,344		
Board-designated endowment funds	14,307,138			14,307,138		
Total funds	\$ 14,307,138	\$ 6,257,344	\$	20,564,482		

Notes to Financial Statements December 31, 2021 and 2020

Changes in endowment net assets for the year ended December 31, 2020, are as follows:

		ithout donor estrictions	Vith donor estrictions	Total
Endowment net assets, January 1, 2020		10,382,995	\$ 5,685,796	\$ 16,068,791
Investment income, net		848,711	272,473	1,121,184
Net unrealized gain		266,544	125,221	391,765
Contributions		888,459	104,402	992,861
Amounts appropriated for expenditure		-	(220,979)	(220,979)
Reclassifications			 14,283	14,283
Endowment net assets, December 31, 2020		12,386,709	\$ 5,981,196	\$ 18,367,905

Endowment net asset composition by type of fund as of December 31, 2020, is as follows:

	 ithout donor	-	Vith donor estrictions	Total
Donor-restricted endowment funds	\$ -	\$	5,981,196	\$ 5,981,196
Board-designated endowment funds	12,386,709			12,386,709
Total funds	\$ 12,386,709	\$	5,981,196	\$ 18,367,905

From time to time, the fair value of assets associated with individual donor-restricted endowment funds may fall below the level that the donor requires the League to retain as a fund of perpetual duration. There were no deficiencies of this nature reported in net assets as of December 31, 2021 and 2020.

Note 11 - Lease obligations

The League leases warehouse space and office equipment under operating leases with monthly payments ranging from \$58 to \$4,383, which expire at various times through November 2026. Total operating lease expense was \$157,098 and \$150,940 for the years ended December 31, 2021 and 2020, respectively.

Notes to Financial Statements December 31, 2021 and 2020

The following are future minimum lease payments due under noncancelable operating leases as of December 31, 2021:

2022	\$ 60,500
2023	55,432
2024	55,083
2025	54,734
2026	24,585
Total	\$ 250,334

Note 12 - Concentrations

Credit risk

Financial instruments, which potentially subject the League to concentrations of credit risk, consist primarily of cash, pledges and trade receivables. The League maintains its cash with high-credit quality financial institutions. At times, such amounts may exceed the federally insured limit. At December 31, 2021, the League had approximately \$1,760,000 in excess of federally insured limits.

The League believes that the concentration of credit risk in its trade receivables is substantially mitigated by the League's credit evaluation process, relatively short collection terms and the financial stability of the larger customers comprising the League's credit base. The League does not generally require collateral from customers. Contributions receivable are comprised primarily of commitments from individuals who are members of the League. The League evaluates the need for an allowance for doubtful accounts based upon factors surrounding the credit risk of specific customers, historical trends and other information.

Market risk

The League invests in various debt and equity securities. These investment securities are exposed to interest rate, market, credit and other risks depending on the nature of the specific investment. Accordingly, it is at least reasonably possible that these factors will result in changes in the value of the League's investments which could materially affect amounts reported in the financial statements.

Note 13 - Related party transactions

The League has some common directors with The ARRL Foundation, Inc. The League performs administrative services for The ARRL Foundation, Inc. and was reimbursed for these services in the amount of \$15,000 for the years ended December 31, 2021 and 2020.

Note 14 - PPP Loan

The League was granted a \$1,048,864 loan under the Paycheck Protection Program ("PPP") administered by a Small Business Administration ("SBA") approved partner. The League initially recorded the loan as a refundable advance in accordance with guidance for conditional contributions; that is, until the measurable performance or other barrier and right of return of the PPP loan no longer existed, the amount would be considered a liability to the League. The League has met the conditions related to the contribution at December 31, 2021 and therefore the full amount of the loan is included as other income on the statement of activities.

Notes to Financial Statements December 31, 2021 and 2020

Note 15 - Employee Retention Tax Credit

The League was granted a \$330,000 Employee Retention Tax Credit. The League initially recorded the amount in accordance with guidance for conditional contributions; that is, until the measurable performance or other barrier and right of return of the Employee Retention Tax Credit no longer existed, the balance would not be considered revenue to the League. The League has met the conditions related to the contribution at December 31, 2021 and therefore the full amount of the tax credit is included as other income on the statement of activities.

Note 16 - Contingency

The COVID-19 pandemic, whose effects first became known in January 2020, is having a broad and negative impact on commerce and financial markets around the world. The United States and global markets experienced significant declines in value resulting from uncertainty caused by the pandemic. The League is closely monitoring its investment portfolio and its liquidity and is actively working to minimize the impact of these declines. The extent of the impact of COVID-19 on the League's operational and financial performance will depend on certain developments, including the duration and spread of the outbreak and its impacts on the League's customers, employees, and vendors, all of which at present, cannot be determined. Accordingly, the extent to which COVID-19 may impact the League's future financial position and changes in net assets and cash flows is uncertain and the accompanying financial statements include no adjustments relating to the effects of this pandemic.

The American Radio Relay League, Incorporated

Supplementary Information Restricted Funds for Time and Purpose Summary Year Ended December 31, 2021

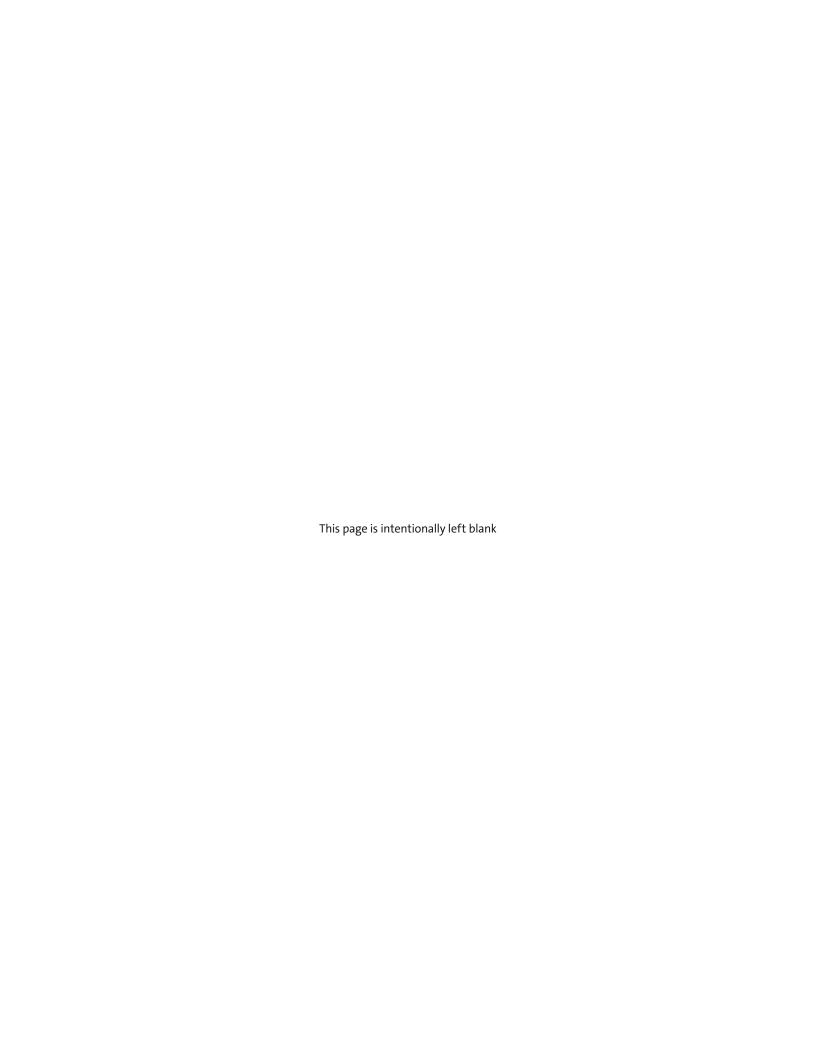
Balance Unrealized Released from December 31, gain restriction 2021	\$ - \$ (1,500) \$ 45,353 52.298 - 1574.263	-		- 45,973	- (65,194) 637,165	- 10,000	- 1,334		- (1,719) 67,249	208,410	- (2,392)	06996 - 966'9	29,876 (20,517) 346,549	9,615 - 53,549	110,630 (206,734) 737,524	9,634 (4,200) 116,837	4,470 (10,084) 25,662	3,745 - 39,264	\$ 227.26.4 \$ (617.482) \$ 4.432.385
Investment income, net	1,108	, , ,	45,614	. •	21,108	•	•	•	•	•	•	11,540	53,104	•	206,734	17,152	10,084	7,477	397 828
Contributions	· · ·	24,485	3,373 255,798	10,893	134,731			3,745	3,080	2,515	2,392			•	•				\$ 441 012
Balance January 1, 2021	\$ 45,745 1,498,058	243,789	153,194 -	35,080	546,520	10,000	1,334	1,707	62,888	205,895	1	78,154	284,086	43,934	626,894	94,251	21,192	28,042	3 983 763
Fund name	H.P. Maxim Award Exceptional Merit	Legal Research and Resource	Ham Aid Fund Defense of Frequencies	Lab Fund	Education and Technology	Steven Rich Fund	Direction Finding	Fred Fish Awards Fund	Legislative Issues Advocacy Fund	Preservation of Artifacts	Awards LoTW Fund	Colvin Fund earnings	W1AW Fund earnings	Youth and Education Fund earnings	Second Century Campaign earnings	CCF Earnings - DX Log Archive	Dave Bell , W6AQ Fund earnings	Snyder Collegiate Amateur Radio earnings	Total restricted funds for time and purpose

The American Radio Relay League, Incorporated

Restricted Funds for Time and Purpose Summary Year Ended December 31, 2020

Balance December 31, 2020	\$ 45,745	1,498,058	243,789	153,194	•	35,080	546,520	10,000	1,334	1,707	65,888	205,895	•	78,154	284,086	43,934	626,894	94,251	21,192	28,042	\$ 3,983,763
Released from restriction	1	(40,000)	(1,002)	(1,002)	(349,177)	•	(301,612)	•		(961)	•		(40,266)		(23,919)	•	(185,109)	(2,800)	(9,150)		(954,998)
Unrealized gain	٠ -	37,881	•				•			•		•		4,812	20,790	6,598	80,540	6,674	3,255	2,552	\$ 163,102 \$
Investment income, net	\$ 1,109	24,558	•		28,129		17,701			•				10,472	45,393		185,112	15,564	9,150	6,784	\$ 343,972
Contributions	· \$	•	26,404	36,687	321,048	4,868	380,516			1,945	4,238	1,608	40,266	•	200						\$ 817,780
Redesignations	₩	•	•	•		•	1,650	•	•	•	•	•		2,597	8,268		•	•	•		\$ 12,515
Balance January 1, 2020	\$ 44,636	1,475,619	218,387	117,509		30,212	448,265	10,000	1,334	723	61,650	204,287	•	60,273	233,354	37,336	546,351	74,813	17,937	18,706	\$ 3,601,392
Fund name	H.P. Maxim Award	Exceptional Merit	Legal Research and Resource	Ham Aid Fund	Defense of Frequencies	Lab Fund	Education and Technology	Steven Rich Fund	Direction Finding	Fred Fish Awards Fund	Legislative Issues Advocacy Fund	Preservation of Artifacts	Awards LoTW Fund	Colvin Fund earnings	W1AW Fund earnings	Youth and Education Fund earnings	Second Century Campaign earnings	CCF Earnings - DX Log Archive	Dave Bell , W6AQ Fund earnings	Snyder Collegiate Amateur Radio earnings	Total restricted funds for time and purpose

See Independent Auditor's Report.







225 Main Street, Newington, CT 06111-1400 860-594-0200 Phone 860-594-0259 Fax www.arrl.org

hq@arrl.org