



CAARA Newsletter



CAPE ANN AMATEUR RADIO ASSOCIATION

MAY 2015 EDITION

President's Desk

by *Hank-W4RIG*



CAARA had a great month in April with Stan (W4HIX) providing another Tech-in-a-Day session on April 11 (20 new license approvals) and providing special service communications for the UKanRun events on April 12 (thanks Gardi (KA1BTK) for leading that effort). Four of our members also worked on the communications team for the Boston Marathon on April 20. We have an active month in May with the Twin Lights half marathon on May 9 and the Rocky Neck 5K on May17 - Gardi will be organizing the teams for those two events soon. We also have an Island Activation scheduled for May 9 as well - this is a special event (See the May issue of QST (page 73) for more information and contact Hank W4RIG if you are interested in participation). We are being listed by the US Islands group for activity for Straitsmouth Island (MA043) and Ten Pound Island (MA044) to

work on certification of those two new listings. We have also applied for recognition for Salt Island (off Good Harbor Beach) and may work on that certification this summer. Anyone interested in wading out to Salt Island some nice warm sunny day let Hank know as well. Gardi has also lined us up to work the Museum Ships weekend event on the Schooner Adventure later this year. These are special Amateur Radio events recognized and documented by ARRL in QST.

Thanks again for Stan and Gardi leading the efforts for CAARA on the public service and special events front - we also appreciate the work by our membership for assistance in all these activities.

Ross (W1RAB) is starting a major effort to document and organize the Radio Amateurs on Cape Ann and vicinity for Emergency Operation preparation. There have been good efforts in the Annisquam and Lanesville areas that Ross wants to extend to all Cape Ann neighborhoods with the cooperation of CAARA and licensed operators that are in the area

but not members of CAARA. Ross will be working on this and we should have more information via the CAARA Newsletter as this efforts moves forward. Thanks again to Jon (K1TP) and Dean (KB1PGH) for their great work on the monthly newsletter.

Information Desk

by *Dean-KB1PGH*



One aspect of the amateur radio hobby always seems to amaze me and that is how vast the spectrum is on how much money you can spend to how cheap you can go to operate on the bands. It blows my mind that if money was no object the new Icom 7850 transceiver will cost you about \$16,000 but on the opposite end a new Icom 718 transceiver will cost you about \$600.00. The funny thing is that if you both ran them at 100 watts through the same antenna how much of a difference would there be on the other end? Probably very little on CW and SSB. With antennas we have the same theme. You can spend \$7000 on a new Steppir Beam or build your own dipole for just a few bucks. The truth is that \$7000 beam won't help you out any more than a cheap dipole when the band conditions are just not there. This hobby can accommodate the rich and frugal alike and sometimes experience can make more contacts than expensive equipment. You don't even have to buy transceiver or antenna to get on the air. The \$40.00 yearly CAARA membership gets you access to the transceivers and a HF beam on the second floor of the clubhouse on sunday mornings and tuesday nights. It's a very under utilized benefit I believe. Plus you can operate on the HF bands during ARRL Field day using club equipment. Even HT's can be expensive and cheap. I have a \$350.00 Yaesu VX 8R and a \$40.00 Baofung and both get me access to the clubs 2 meter and 440 repeaters. The worst sin is sinking your hard earned money into a decent transceiver and antenna and then never use it. An HF rig that sits unused is a sad one at best. Don't let your rigs get



CAARA Newsletter
Cape Ann Amateur Radio Association
6 Stanwood Street
Gloucester, MA 01930

CAARA Newsletter is a monthly publication of the Cape Ann Amateur Radio Association (CAARA). It is the policy of the editor to publish all material submitted by the membership provided such material is in good taste, relevant to amateur radio and of interest to CAARA members, and space is available. Material is accepted on a first come, first serve basis. Articles and other materials may be submitted by internet to Jon at k1tp@arrl.net. If possible, material should be in Word format. Material may also be submitted as hard copy to Jon-K1TP or any Club Officer.

All material published in the CAARA Newsletter may be reproduced for noncommercial use provided such use credits both the CAARA and the author of the article. Copyrighted material will not be accepted without accompanying written permission to publish.

The opinions expressed in the CAARA Newsletter are solely those of the editor or other contributors and do not necessarily reflect the opinions of either the Board of Directors or membership of CAARA.

Jon Cunningham- K1TP Editor
Dean Burgess- KB1PGH Reporter

Board of Directors- 2013-14

President: Hank McCarl W4RIG
Vice Pres: Jake Hurd K1LDL
Treasurer: Stan Stone W4HIX
Clerk: Bill Poulin WZ1L

Directors:

Gardi Winchester KB1BTK
Tony Marks N1JEI
Pete Chadbourne -K1LJO
Larry Beaulieu AJ1Z
Paul Anderson KA1GIJ
Roger Smith KB1YTJ

Welcome to CAARA:

CAARA, an ARRL affiliated club, operates the 2 meter W1GLO repeater on 145.130 MHz with antennas located on the Crown Castle tower in the Blackburn Industrial Complex in Gloucester Massachusetts. It has an average effective radius of 60 miles, and serves Eastern Massachusetts, Cape Cod, Rhode Island, Southern New Hampshire, and maritime mobile stations. CAARA also operates the W1GLO repeater on 224.900. The former W1RK 443.700 repeater with antennas located in Magnolia is now located at the Crown Castle Tower.

The Association is one of the few amateur radio clubs that has its own clubhouse. Located at 6 Stanwood Street in Gloucester, it includes a permanent HF station with rotating beam and vertical antenna along with a 2 meter packet station and 2 meter voice and 220 MHz transceivers.

Amateur radio exams are held on the second Sunday of each month at 10:00AM at the CAARA clubhouse. Anyone who is considering a new license or an upgrade, is welcome to test with us. There is no pre-registration necessary. Contact the head of our VE team Bob Quinn if you have any questions about monthly testing. Monthly member meetings are held on the first wednesday of each month at 7:30 PM except for July and August

Each Sunday evening at 9:00pm, the club operates a 2 meter net on 145.130. This is an open and informal net which disseminates club news and prepares operators for emergency communications work. All are invited to check into the net as club membership is not a requirement.

The club is open every Tuesday from 4-8PM for CAARA members to stop by and socialize, as well as use the extensive collection of ham radio gear.

Information Desk

by Dean-KB1PGH



lonely. Turn them on at least once a day and at least listen around the bands to see what's going on. Don't take it for granted as well. Take it from me where I cannot operate HF due to power line and industrial noise. I get about 15 hours a year in on operating time going HF portable (Having a 2 year old dampens my time as well). So if you have a good home location for HF please take advantage of it. So as we can see your wallet can take a hard hit in this hobby if you let it or you can live amateur radio on the real cheap. As the saying goes, "The HAM in ham radio means-Have Another Mastercard!" For this month's emergency preparedness tip please take the time this month to check and test and replace the batteries in all of your smoke detectors and carbon monoxide detectors in your home. Of course each floor should have at least one. You should also have at least one fire extinguisher in your home as well. Please make sure that it says "Charged" on the valve as well. Make sure to manage all the power wires in your ham shack as well. Check once and a while to make sure nothing is frayed or crushed or anything like that. See you in June!



Editor Roundup

by Jon-K1TP



The Ipswich Emergency Management agency is sponsoring a National Weather Service Skywarn spotter training class. The class will be held on Thursday May 15th starting at 7 PM and ending at 10 PM at the Ipswich Town hall bottom floor training room on 25 Green street in Ipswich, Mass. There is no registration required for this course.

This is a good site for ham manuals:

<http://mcars.us/Manuals/>

The top two photos in the right column were taken at Tech in a Day in April....two of the examiners, Bob-WV1A and Bill-WZ1L put in a long day testing almost 30 prospective hams. The photo on the bottom right is Evan, who just passed his Tech License and is now a regular at the clubhouse and on the 2 meter repeater. Evan even took apart his Baefeng radio and soldered a few wires to fix the microphone problem.



WHAT'S GOING ON AT THE CAARA EMCOM CENTER?

CAARA sponsors another successful Tech in a day session.

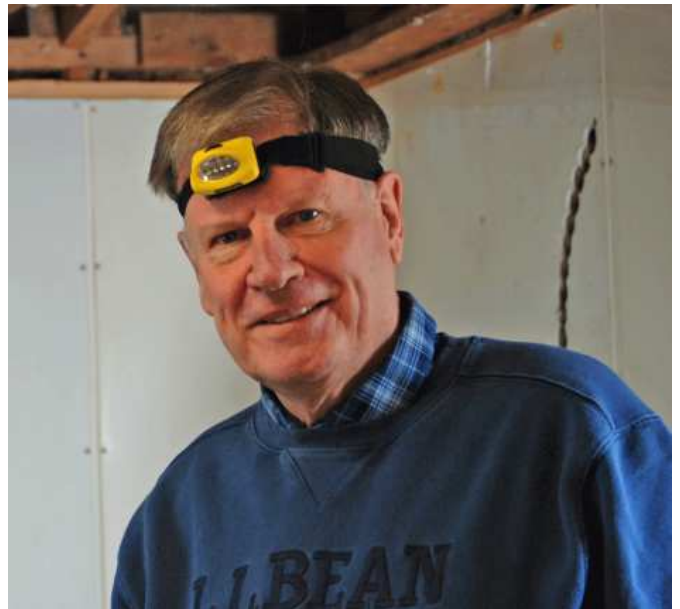
CAARA sponsored another successful Tech in a day session on Saturday April 11th at the Lanesville Community Center in Gloucester Mass. CAARA member and Treasurer Stan Stone W4HIX led the all day session which started at 8:30 AM and lasted until the Technician Class exam was administered at 4 PM. There were 24 people who took the Tech exam and out of that 20 passed and earned their license. We also had 1 person pass the General license class exam and 1 pass the Extra class license exam. A big thanks goes out to all who helped out

including CAARA ARRL VE liaison and VE Team Leader Bob Quinn WV1A, Bill Poulin WZ1L who helped with set up in the early AM and stayed all day to administer tests, to CAARA VE's Dave Robinson KD1NA and Ron Beckly N1RJB who helped with scoring the exams and others who participated in this event. There have been over 160 Technician Class Licenses granted through CAARA's Tech in a day program spread out over 12 sessions since 2009.



Above photo of Larry, Jake, and Stan discussing something mind shattering on a Sunday morning at the club. Photo above right and on the next page of the amazing "King of Portable Operations", Dean- KB1PGH. Dean set up his station at the Tech In a Day event and made many 10-20 meter contacts despite the bad HF conditions that day.

Many of the students got a chance to see ham radio in operation for the first time in a first class portable type scenerio. Thanks Dean and all who helped out that day getting more hams on the radiowaves.



What could go wrong in the kitchen rebuild when Bob- WA1UCG and Jon- K1TP get together with a handful of tools?



The van on the right is Gardi's displaying his newly modified HF antenna system.



The Cable News Interview *by Curtis-AA3JE*

Betty: Hello, this is Betty White. Welcome to Science Tuesday. I am broadcasting live from The Robotics Laboratory of the National Electronics University. We are here today to see a new breakthrough in interactive language instruction. I am speaking now to Processor Brown, who will tell us about his invention.

Brown: (Nervous) Er, well. I mean, is that a camera? (he freezes into silence)

Betty: Go ahead, Professor, speak right into the camera there. The little red light.

Brown: Well, wwwwwweeeee. we, we had, we had a shortage of language instructors, so we programmed a computer and the robot lab made an interface for it. To teach I mean. Teach English. The Language. English. Language. Teach.....(he runs out of words).

Betty: (rescues him) Professor, are you saying that instead of highly trained human instructors we will now be able to use computers and robots to teach English?

Brown: Well, er, yes. Of course it is still early in development. It is just a prototype.

Betty: How exactly does it work?

Brown: The student sits down at the keyboard. He or she dials up the right intranet site, and they start the class. The robot acts as a teacher would.

Betty: Can I see?

Brown: I suppose so. If it is still working. We have troubles.

Betty: (whispers) Professor, this is live television. Can you not be more exciting? And could you be more positive?

Brown: This is as exciting as I get. It is why I went into computers. They don't care how I act. My wife says I am pretty dull. So do my kids.

Betty: Very well. That is not important right now. May we see the demonstration?

Brown: Just look at the screen.

Betty: (to Charlie the cameraman) Can you get it in the shot?

(Charlie gestures)

Betty: OK? You got it?

Betty: (to screen) Hello in there.

SM: Hello yourself.

Betty Excuse me?

SM: You said hello, the proper response is to say hello back , once.

Betty: Professor, this cannot be right.

Brown: What do you mean?

Betty: Professor, that is a hand puppet.

Brown: Oh no. It is a sophisticated animated computer controlled animatronic device that is made to LOOK
like a hand puppet.

Betty: This is completely ridiculous. It is a SOCK MONKEY.

SM: You have something against robots, Ma'am?

Betty: No, no, not at all. But you look like a Sock Monkey puppet.

SM: None of us can help how we are made, Ma'am.

Betty: Professor! What is going on here?

Brown: We started with a Japanese computer controlled robot head we got from Osaka University. It was very realistic and kind of creepy. The students all got scared. Besides, Osaka wanted 300,000 yen a month for that thing. We made this instead out of parts we had for a robot snake intended to clean out the everglades. Python, I think. The funding failed for the snake, so we made this thing.

Betty: It looks like a sock on a stick!

SM: Miss Betty? None of us can help.....

Betty:how we are made. I know. Sorry monkey.

Brown: Could you just do the interview?



Betty: Oh all right. Mister Monkey.....

SM; Minsu

Betty: I beg your pardon?

Minsu: My name is Minsu. Please use my name.

Betty: A sock on a sick has a name?

Minsu: Ma'am, none of us can help....

Betty:how we are made, I know. Sorry Minsu. Please go on.

Minsu: I have excellent programming.

Betty: What do you mean?

Minsu: I've got the whole course right here, in my sock with me.

Betty: How are you any better than a regular language computer?

Minsu: Interaction. Human interaction. Feedback.

Betty: You are not even remotely human.

Minsu: I can look disapproving (demonstrates), mildly approving (demonstrates) and strongly approving (demonstrates).

Betty: What else?

Minsu: Well, that's about it.

Betty: You can make a face, nod, and shake your head a bit? Not much of an emotional range.

Minsu: it's a small part, but it's important not to over act. I have a much broader dynamic range if needed.

Want to see my romantic look?

Betty: Oh, please, no. It's a family news show.

Minsu: I can do it really well too. Watch this. (he moves from side to side while singing YEAH YEAH YEAH).

Betty: Professor, is the big language breakthrough really a robot sock monkey that can go yeah, yeah, yeah?

Brown: It was a small grant. We did what we could.

Betty: This is Betty White wrapping up her interview with Professor Brown and Minsu the Sock Monkey. Who knows what we can expect in the future from this team? Stay tuned to Science News Cable, all the latest in cutting edge science.

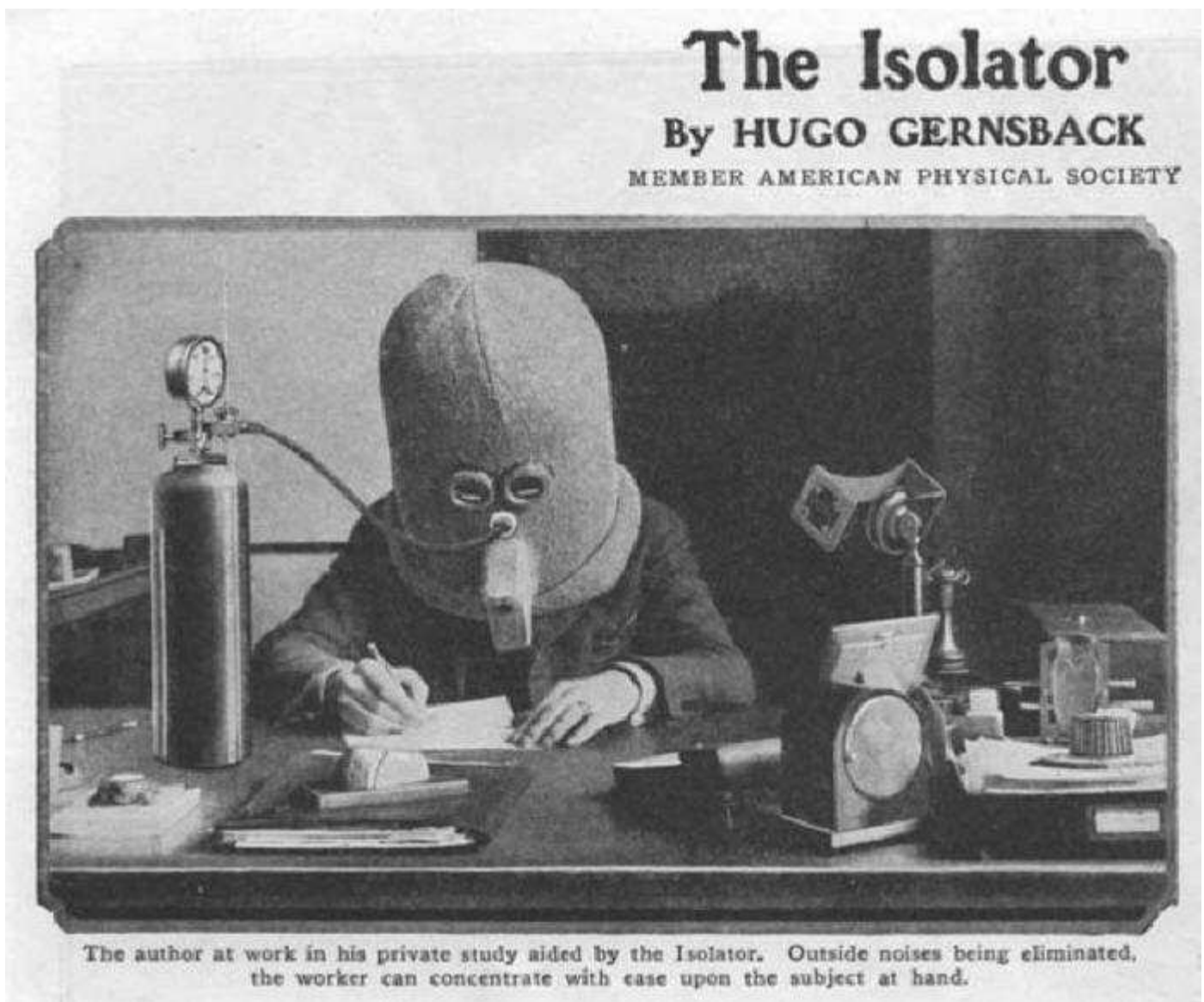
(she makes a cutting gesture, Charlie cuts the camera off.)

Betty: Professor was this a joke?

Brown: No, no, it's the real project. Early stage development.

Betty: (to professor) Well, good luck, I think you are going to need it.

(to cameraman) Let's go Charlie, I need a drink.





HUGE PROGRESS AT CAARA STOP- PING ANIMALS FROM USING CAARA BUILDING AS A PLAYHOUSE!

We have to thank Ross- W1RAB for single handedly stopping rodents who have been using our clubhouse as a recreational area and outhouse for years.

As we all know, Ross is a doer. He brought his ladder and tools over and stopped the little rats from getting into our newly renovated upstairs operating area.

When the building is re-sided this area will be stripped and new fascia and soffit boards will be installed.

The club is slated to be resided this summer. The decision was made to shingle the front with cedar shingles but some have questioned “why not use vinyl instead?”

The BOD is going to re-discuss the matter and make a decision at the next meeting.

On another note, the kitchen project is well underway now that the building is free of the pesky little critters in the ceiling. The ceiling was taken down by Roger. The buiding inpector and electrical inpector have viewed the ceiling area and have made suggestions which we are following.

We have completed the re-wiring of the kitchen, replacing bad wiring and also adding a new 20 amp GFI circuit. Stay tuned for updates and the grand reopening of the kitchen for breakfast activities.





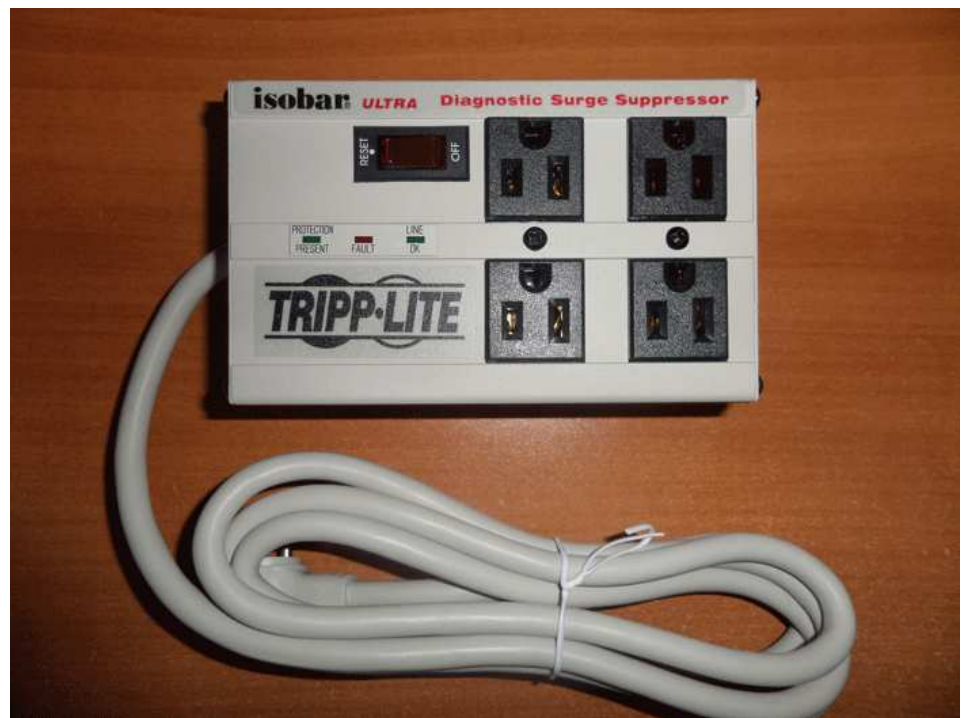
by Dean-KB1PGH

Tripp Lite Isobar Ultra Surge Suppressor Review

As I mentioned in my “Information Desk” column this month us amateur radio operators can spend a lot of our hard earned money on our equipment. Lets say a decent HF rig can cost you a couple grand easy, nonetheless everything else such as antenna tuners and amps. Now of course all of this equipment normally runs on your household AC current, unless your portable power, such as a generator,solar and battery. Now with all this AC power comes a lot of “Line noise” that can interfere with your HF rig and HF reception. I bet everyone reading this has some appliance in there house that creates the “Line noise” that we all know about. Also don`t forget that AC power is not as stable as you may think. There can be voltage spikes and other surges with amperage and voltage and they don`t always have to come form lightning strikes. For example, back in the day National Grid had a power outage in our neighborhood in Manchester. When they turned the power back on they screwed up the wire connections and our house lights were so bright for about 10 seconds, then the power went out again.When the power turned back on later we found out that the TV and other appliances did not turn on because they were destroyed by the surge. Fortunately National Grid paid for the repairs but you get

the point.So the best thing is get some sort of protection in line between your ham equipment and that AC outlet. I used to waste my money getting those cheap surge suppressors as target or the hardware store but don`t waste your money. They can`t compare to the protection you`ll get with the Tripp Lite Isobar Ultra Surge Suppressor. The model I got has 4 outlets but you can get them in 6 outlet models as well. This model cost me \$35.00 on Amazon which is a great price. Those cheap

suppressor can handle bigger surges as well with 3330 Joules of surge energy protection. The Tripp Lite provides 40 to 80 dB of EMI/RFI filtering which is higher that the cheap suppressors. The build quality is amazing since each AC outlet has VHF and HF capacitors to filter out Rf noise. Each AC outlet also has toroidal balanced chokes and large heavy duty ferrite rod core inductors which both remove noise interference and provide increased noise suppression. The Tripp Lite



suppressors are made of plastic but this one has an all metal housing and the build quality is top notch.he outlets are spread further apart so you can fit the wall warts in as well. The Tripp Lite Surge Suppressor has “Isobar” technology which filters out all line noise between any equipment that is plugged into the suppressor. The clamping voltage is 140 volts which is much better that the usual 300 volts you`ll find in the cheaper models which means less chance of a damaging “Overvoltage”. This

also has a Safe Thermal fuse which protects against fire due to extreme overvoltage.You can see in the photo that the Tripp Lite has a “Protection present” light and a “Line OK” light so you know that your protected.

So please heed this advice and protect your expensive ham radio equipment with a surge suppressor and don`t buy the cheap ones either. For just a couple of dollars more order a Tripp Lite today.

YUKAN RUN ROAD RACE- PUBLIC SERVICE EVENT IN APRIL WITH CAARA PROVIDING COMMUNICATIONS





Armed Forces Day 2015 Crossband Communications Test to Offer New Modes

The annual [Armed Forces Day Crossband Communications Test](#) set for Saturday and Sunday, May 9-10, will offer Amateur Radio operators a chance to try their hand at using more modern military communications modes, such as MIL-STD Serial PSK. Also new this year is the inclusion of a crossband Automatic Link Establishment (ALE) test. The Army, Air Force, Navy, Marine Corps, and Coast Guard cosponsor the joint military/Amateur Radio event which this year marks the 65th Armed Forces Day and the 90th anniversary of the Military Auxiliary Radio System (MARS). Armed Forces Day 2015 falls on May 16, but the crossband test is held on the earlier weekend to accommodate those visiting Dayton Hamvention May 15-17.

Ham radio attempts to fill communication gaps in Nepal rescue effort...PCWORLD MAGAZINE

Amateur radio has stepped in to fill communication gaps in Nepal, which is struggling with power outages and a flaky Internet after a devastating earthquake on Saturday killed over 5,000 people. The hobbyist radio operators, also known as ham radio operators or hams, are working round-the-clock to help people get in touch with relatives, pass on information and alert about developing crises ever since the 7.8 magnitude earthquake hit about 80 kilometers from Nepal's capital city of Kathmandu. Ham radio sends voice or morse code messages across radio frequencies and has often helped in emergencies. It can work off solar power or low-voltage batteries, which means that the radios can continue to work even after smartphones and laptops are discharged, said Jayu Bhide, National Coordinator for Disaster Communication at the Amateur Radio Society of India, on Wednesday.

The electricity supply has improved in many parts of Kathmandu, but when there were power outages, ham operators resorted to transmitting at low power, an operation known as QRP, which requires as little as 15 to 20W, said Satish Kharel, a lawyer in Kathmandu, who uses the ham call signal 9N1AA. "When the power was out, I used to plug into my car battery," he said.

Ham operators in Nepal and India are working in shifts to keep communications going between them and hams in other parts of the world like Turkey, Australia and New Zealand, Bhide said.

‘CREATIVE FUNDRAISING’

David Linsky KAILKX

Here is another revenue raising idea that has the potential to bring in **very significant** funds to ‘CAARA’S COFFERS’.

First, a few words about hoarders, (I mean ‘**collectors**’). We all collect something. Among some of the items that people have collected over the years are, buttons, rocks, stamps, coins, Red Sox memorabilia, shells, books, and yes, even Ham radios, (**You know who you are!**). There is probably a hoarder, (**I mean collector**’) out there for every item that has ever existed. There is some hoarding, (**I mean ‘collecting**’), in all of us!

So keeping that in mind, I am always careful not to criticize someone if I notice multitudes of a single item in the possession of someone whom I may be visiting. I try very hard to pay no particular attention and make no remark if I just happen to trip over a pile of 30 stilson wrenches in the middle of the floor during a visit, (even though we can only use at most 2 at a time). They aren’t hoarders, they are known as ‘**collectors**’.

Or when I once noticed 12 left handed screw drivers at someone else’s shop during a visit, I didn’t even give it a second glance, (I have a few left handed screw drivers myself, but please don’t tell anyone). I would never ever refer to these individuals as hoarders. We, (**I mean they**), should always be referred to as ‘**collectors**’!

So, bearing all of this in mind, a local hoarder, (I mean ‘**collector**’), is seeking more of a specific item to add to his hoard, (**I mean ‘collection**’).

This local hoarder, (**I mean ‘collector**’), is willing to make a donation to CAARA of **\$1.00** for every one of these items that is turned in, and with **no quantity limit!** This hoarder, (**I mean collector**), tells me that \$1.00 each is very fair, being **much more than scrap price!**

He wants to really grow his hoard, (**I mean ‘collection**’). Who am I to criticize? I’ve been known to hoard, (**I mean ‘collect**’), some items myself from time to time, (OK, maybe all of the time, **but please don’t tell anyone!**).

What is that item you may ask? That would be a very good question.

It used to be a very common item, but has become less common over the years. They are still out there though.

It is now hoped that you are curious what the item is. Well, here’s a hint. When is the last time that either you or someone whom you know has replaced a window or windows in either yours or their home? When the old window is removed, 4 of these are typically removed as well, (**that is if the installer did a proper job of it**).

Yes, you are correct! The items that this local hoarder, (**I mean ‘collector**’), is seeking more of to add to his hoard, (**I mean ‘collection**’), are **window weights**, aka **sash weights!** The only request that is being made by this hoarder, (**I mean ‘collector**’), is that they be a **minimum length of 12”**.

Because there are no known uses for them other than the purpose for which they were intended for in the first place, they almost always end up in the trash. When a home or building is renovated or added on to, they typically get tossed into the roll-off container along with the other discards.

Who benefits when that happens? That’s right, **no one benefits!** That’s just not responsible recycling and it’s not helpful to the environment either! Now that’s not efficient reuse of a perfectly hoardable, (**I mean ‘collectable**’ item). They should be rescued and responsibly recycled or, in this case, they should be added to a respectable hoard, (**I mean collection**)!

As spring and summer draw near, lots of windows will no doubt be replaced. That greatly increases the availability of window weights.

Some folks don't actually toss them away. They hide them away in the corner of their basement or garage thinking that they will come up with a use for them some day. But, in reality, they will probably never be seen or used again. They just can't bring themselves to toss them out. Sort of like the hoarder, (**I mean 'collector'**), who is looking to hoard, (I mean **'collect'**), lots of an item for his hoard, (**I mean 'collection'**).

Here is an ideal opportunity to assist a well meaning hoarder, (**I mean 'collector'**), and help CAARA at the same time! (I like birds and I don't throw stones, so I'm not going to refer to the 2 birds with one stone adage, **and you can quote me on that!**).

And this is where we come in to the picture, and for the benefit of CAARA and its members, as well as a good natured and well meaning hoarder, (**I mean 'collector'**). All we have to do is to **'LOOK AROUND AND ASK AROUND'** to find some or several of them. Just talk to a club Officer or Director when you bring some to CAARA and they will take care of the rest.

I also want to encourage everyone to ask around and possibly meet other hoarders, (**I mean collectors**), to see what items that they hoard, (**I mean collect**) as well, and would be willing to make a donation to CAARA for.

It's an ongoing challenge to fund all of the various expenses that the club incurs. But we have always been up to those challenges! This is yet another fund raising opportunity which, along with all of the good work that all other CAARA members are participating in, will help CAARA continue to thrive and prosper.

So please consider talking to your friendly carpenter, window installer, friend, relative, neighbor, hoarder, (**I mean collector**), etc. The **ideal situation would be if they gave them to**

you. But if you needed to compensate them slightly, that would be good as well. Once they are turned in, you would be reimbursed quickly for what you had compensated them for. CAARA would still benefit, just not as much as if you obtained them without cost.



Photography 101 by Gardi- KAIBTK

This month I'll discuss Chromatic Aberration Distortion. "CA" is a problem lens faces when trying to focus different wavelengths of light (colors). Zoom and focus in a lens are achieved by mechanically positioning the lens' elements at specific relative positions to each other within the lens body. Generally, the greater the zoom or wider the range of a lens, the more elements it has. As different frequencies of light pass through each of the lens' elements, they each "bend" the colors differently.

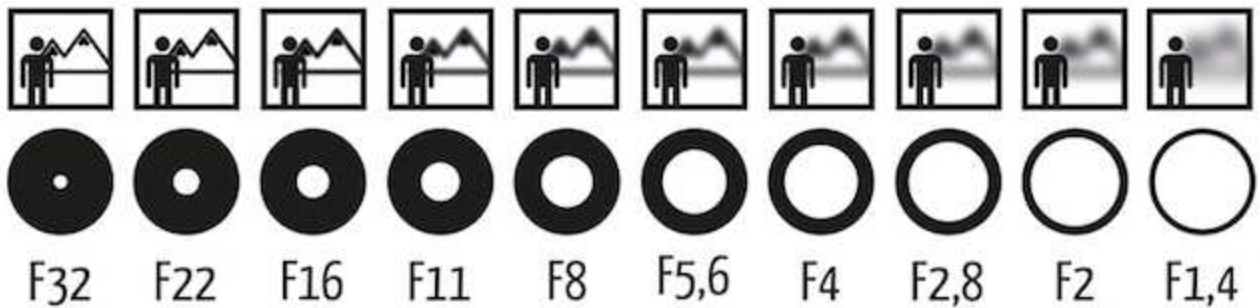
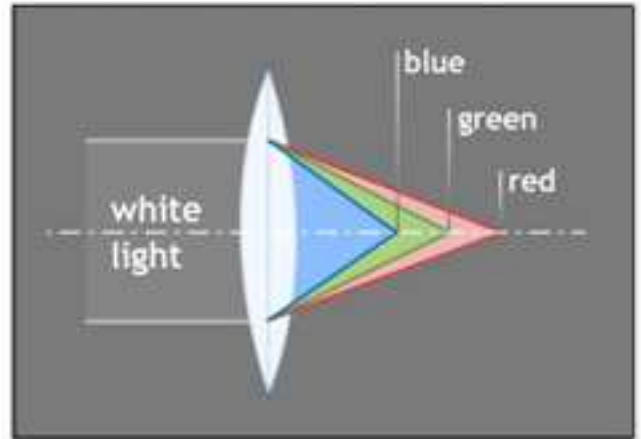
The more elements, the greater the effect of CA. Once the image reaches the recording media, some frequencies of light may not be in proper alignment. What happens is similar to the creation of a rainbow:

CA manifests as an image that looks to be slightly out of focus but on closer inspection, you may see only certain colors are out of focus while some are in focus, usually a magenta halo on one side of objects and a cyan ghost on the other:

Camera lens manufacturers have come a long way to reduce the effects of CA, but lenses that take CA into account are very expensive.

To reduce the effects of CA in your photographs:

- Steer clear of inexpensive, poor quality lenses.
- Avoid or test "Super Zoom" ZLRs for CA before you spend your money.
- Avoid using wide-range, super zoom lenses.
- Avoid using the extremes zooms of any lens.
- Stop down (use smaller) aperture settings, f5.6 and less (higher number) when possible.
- CA has a lesser effect on the center of the frame.
- CA will have a greater effect in high contrast images.
- Some photo editing software will have a CA reduction tool to reduce the effect.
- If possible, "test drive" any lens before you buy.



ARRL TO FCC: AMATEUR RADIO AND VEHICULAR RADARS CAN JOINTLY EXIST ON 77-81 GHZ

The ARRL has told the FCC that Amateur radio and vehicular radar systems can co-exist in the 76 to 81 GHz band as we hear from Amateur Radio Newsline's Don Wilbanks, AE5DW: — [Don] In comments filed in response to a February FCC Notice of Proposed Rulemaking and Reconsideration Order the ARRL has told the Commission that it should make no change in the Amateur Radio allocation at 76 to 81 GHz. Nor should it impose any additional regulatory constraints on Amateur or Amateur-Satellite uses of the band. In a Notice of Proposed Rulemaking and Reconsideration in ET Docket 15 dash 26, the telecommunications regulator solicited comment on issues involving expanded use of various radar applications in the 76 to 81 GHz. This is spectrum that Amateur Radio shares with other services. The band 77.5 to 78 GHz is allocated to the Amateur and Amateur Satellite services on a primary basis, and to the Radio Astronomy and Space Research services on a secondary basis. FCC Notice of Proposed Rulemaking and Reconsideration was in response to a 2012 Petition for Rulemaking RM-11666 by Robert Bosch LLC. It also was in answer to a pair of petitions for reconsideration of a 2012 Report and Order addressing vehicular radar systems in the 76 to 77 GHz band. ET 15 dash 26 also incorporated earlier proceedings. In its comments, the ARRL suggested that the FCC overreached in proposing unjustifiable changes at 77 to 81 GHz on its own initiative. The League said that this is not called for in the text of the Bosch Petition for Rule

Making or in any comments that have been filed thus far. Nor was there any suggestion that there is any incompatibility between Amateur Radio operation and automotive Radars. The ARRL also referenced a current International Telecommunications Union study that has definitively established compatibility between short-range automotive radars and Amateur radio operations. In closing, the ARRL said should there be any unjustified displacement of the Amateur or Amateur-Satellite services from any portion of the 76 to 81GHz band, the FCC should allocate equivalent spectrum for those services. The League suggested the bands 75.5 to 76 GHz and 81 to 81.5 GHz as possibilities. More can be found at www.arrl.org. (ARRL)

U.S. Postal Rates - Going up!

Beginning April 26th, there will be some new postal rates.

Here is a quick summary:

Forever Stamps — Will remain the same at 49 cents

Global Forever Stamps — Going Up! \$1.15 to \$1.20

Postcards — Going Up! 32 cents to 33 cents

Additional Ounces — Going Up! 21 cents to 22 cents

The complete breakdown of the new rates can be seen at:

<http://blog.stamps.com/2015/03/04/usps-announces-postage-rate-increase-starts-april-26-2015/>

Mysterious radio bursts received on Earth from deep space:

In the event that you were a Morse code agent getting messages and ran over something that couldn't be

random, you would think it was from people, i.e. brilliant creatures, isn't that so? All things considered, that is pretty much what researchers got from space in radio bursts.

Strange radio bursts got on Earth from deep space were sent in dispersion measures that couldn't be random events, researchers say, proposing that they may have originated from brilliant aliens.

Professor John Learned from the University of Hawaii said of the fast radio bursts (FRBs) "If the pattern is real ... it is very, very hard to explain."

A radio telescope grabbed a FRB a year ago surprisingly since 2001. FRBs are amazingly short radio bursts from probably billions of miles away in profound space that last simply a couple of milliseconds.

Astrophysicists have no clue where FRBs originate from. Most propose they begin from a few billions of light years from here. In any case, they could start much closer to home, they include.

Although to a great degree short in span, every FRB has more vitality that that discharged by our Sun in 24 hours.

Researchers are not able to clarify why FRBs show up in an example of numbers that appear to take after no laws of physical science we know exist – unless they were conveyed by an intelligent being.

In New South Wales, Australia, in November 2014, the CRISO Parkes Radio Telescope caught a "live" FRB. On past events FRBs had just been distinguished by stargazers a few weeks or months after their equipment had lifted them up.

Michael Hippke of the Institute for Data Analysis in Neukirchen-Vluyn, in Germany, Wilfried F. Domainko of the Max Planck Institutes, additionally in Germany, alongside

Professor Learned clarified that the FRB signs had scattering measures in products of absolutely 187.5. This implies, they say, that the blasts are originating from sources numerous billions of light years from Earth at distances which are precisely multiples of one another. They included that the signs may be originating from a much closer source.

Researchers propose that maybe FRBs may have originated from distant stars or dark holes. Nonetheless, their evidently ponder designs likewise indicate something intelligent making them, numerous remark.

According to Hippke, Domainko and Learned:

“We find that FRBs tend to arrive at close to the full integer second, like man-made perytons. If this holds, FRBs would also be man-made. This can be verified, or refuted, with new FRBs to be detected.”

[Emily Petroff, a PhD student](#) at Swindurne University, Melbourne, Australia, who observed the ‘live’ FRB in November 2014, stated:

“These bursts were generally discovered weeks, months or even more than a decade after they happened. We are the first to catch one in real time.”

Researchers would love to know where in space these FRBs originate from, Ms. Petroff said. The greater part of them gauge they begin from some place in space around 5.5 billion light years from Earth.

Ms. Petroff, who is sure we’ll soon find out, stated “We’ve set the trap. Now we just have to wait for another burst to fall into it.”

The Goncasuyu Project

The historical legendary wireless station Goncasuyu played a significant role at the Çanakkale Sea Warfare, followed the radio telegraph messages of enemy naval forces and informed the Turkish bastions.

After 100 years, Goncasuyu has been re-engaged by TRAC (Amateur Radio Society of Turkey) to share our peace messages with the world. Goncasuyu salutes the world with the HAM lingo “73!” meaning “Best regards!”

The project has been planned by TRAC in the memory of Mehmetcik (a poetic term for Turkish soldier) and his epic battle. The story of Goncasuyu will be shared with the visitors at the field and with the radio amateurs of the world on the air. Ten locations are planned for operations. Five stations at the Gallipoli Peninsula are: Goncasuyu (Rumeli Bastion), Kilitbahir, Abide (Monument), Kocaçimentepe and Anzac Bay. The other five stations at the Çanakkale (Anatolia side) are Canakkale University 18 March University area (fortress in the land war), Esenler District, Lapseki, Çardak and Canakkale Downtown).

TRAC Branches and radio amateurs from Australia and New Zealand have been invited to the field studies. HAM related visitors will be hosted by TRAC and operations will be organized and performed with the participants.

You may follow this web site for further information, news and announcements. All information and calendar are at: <http://www.goncasuyu.org/?lang=en>

FCC proposes to permit amateur access to 2200 and 630 meters

Amateur Radio is poised to gain access to two new bands! The FCC has allocated a new LF band, 135.7 to 137.8 kHz, to the Amateur Service on a secondary basis. Allocation of the 2.1 kHz segment, known as 2200 meters, was in accordance with the Final Acts of the 2007 World Radiocommunication Conference (WRC-07).

The Commission also has proposed a new secondary 630 meter MF allocation at 472 to 479 kHz to Amateur Radio, implementing decisions made at WRC-12.

No Amateur Radio operation will be permitted in either band until the FCC determines, on the basis of comments, the specific Part 97 rules it must frame to permit operation in the new bands. Amateur Radio would share both allocations with unlicensed Part 15 power line carrier(PLC) systems operated by utilities to control the power grid, as well as with other users.

In addition, the FCC has raised the secondary Amateur Service allocation at 1900 to 2000 kHz to primary, while providing for continued use by currently unlicensed commercial fishing vessels of radio buoys on the “open sea.”

The allocation changes, associated proposed rules, and suggested topics for comment are contained in a 257-page FCC Report and Order, Order, and Notice of Proposed Rulemaking addressing three dockets - ET-12-338, ET-15-99, and IB-06-123 - which affect various radio services

in addition to the Amateur Service. The FCC released the document on April 27.

With respect to the new LF sliver band at 135.7-137.8 kHz, the FCC concluded that Amateur Radio and PLC systems can coexist there.

”Since the Commission last considered this issue, amateurs have successfully operated in the band under experimental licenses without reported PLC interference,” the FCC said. “We are also encouraged by the fact that numerous fixed radionavigation beacons, which operate at much higher powers, share spectrum with PLC systems without reported interference.”

In 2003 the FCC turned down an ARRL proposal to create a 135.7-137.8 kHz Amateur Radio allocation, after utilities raised fears of a clash between Amateur Radio and PLC systems operating below the AM broadcast band. This time, the FCC said, “It is clear that we will have to establish appropriate requirements for amateur use of the band, if we are to ensure compatibility with PLC systems.” WRC-07 set a maximum effective isotropic radiated power (EIRP) limit of 1 W, which is what the FCC is proposing.

The FCC said it “explicitly” rejects the suggestion that it choose one use of the spectrum over the other. “Our objective is to allocate spectrum on a secondary basis to amateur stations in a manner...compatible with existing PLC systems,” the FCC said.

”However, we also expect to permit amateur operators to make use of the allocation in a manner that is less burdensome and more productive than they are currently afforded under

the experimental authorization process.”

The Commission said that if it concludes, after considering the record, that Amateur Radio and PLC systems cannot coexist, it would “defer the adoption of service rules, and amateur users will have to continue to use the experimental licensing process to operate in the band.”

With respect to the proposed 630 meter allocation, the FCC has proposed limiting amateur stations in the US to a maximum 5 W EIRP.

In the US, 435-495 kHz is allocated to the Maritime Mobile Service on a primary basis for federal and non-federal use, and to the aeronautical radionavigation service on a secondary basis for federal use.

The ARRL submitted a Petition for Rule Making in 2012 asking the FCC to allocate 472-479 kHz to the Amateur Service on a secondary basis and to amend the Part 97 rules to provide for its use. Several countries, including Canada, already have access to the band. The ARRL has pointed out that during its extensive course of experimentation in the spectrum around 500 kHz, no interference reports have been received.

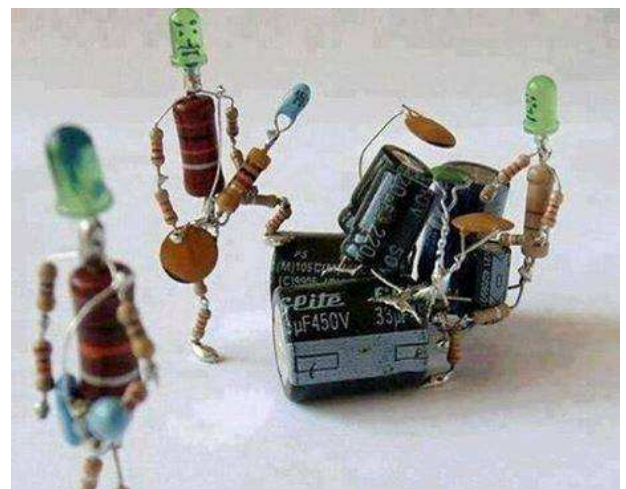
The FCC said that the “cornerstone” of the technical rules it’s proposing for both bands is “physical separation between amateur stations and the transmission lines” carrying PLC signals. “Such a separation, in conjunction with limits

on the amateur stations’ transmitted EIRP and antenna heights, will enable PLC systems and amateur stations to coexist in these bands,” the FCC asserted. “In addition, we propose to limit amateur stations to operations at fixed locations only, to ensure that this separation distance can be maintained reliably.”

The FCC said it wants to hear from both PLC system users and radio amateurs regarding technical requirements it would have to put into place to permit both users to operate comfortably and without compromising the PLC systems. The Commission suggested that other requirements might include limits on antenna heights, transmitter power limits, and operating privilege limits based on license class or mode. The ARRL will file comments in the proceeding.

The FCC will accept comments for 60 days following publication of the Report and Order, Order, and Notice of Proposed Rulemaking in the Federal Register. Reply comments would be due 30 days after the comment deadline.

Source: The American Radio Relay League





Handy Items when ya go to peak up an old receiver.
 A Fluke 200 Mc combiscope and a SRS Synthesized Wave Generator .
Courtesy of Jake- WILDL at the home shack.

History This Week

- 1770** Captain Cook lands at Botany Bay, Australia.
- 1780** William Herschel discovers first binary star, Xi Ursae Majoris
- 1789** Mutiny on the “Bounty” occurred, and sailed to Pitcairn Is.
- 1791** Samuel Morse born, Charlestown, Mass. USA.
- 1813** Patent for rubber was given to J.F. Hummel of Philadelphia, PA.
- 1830** First regular steam train passenger service starts
- 1837** England issues its first stamp, 1 penny Queen Victoria
- 1849** A telegraph register was patented by Samuel F. B. Morse
- 1865** SS Sultana exploded, 1450 - 2000 die. Worst in US history.
- 1878** Phonograph shown for first time at Grand Opera House
- 1879** Electric arc lights used for the first time — in Cleveland, Ohio.
- 1880** The first U.S. patent for an electric hearing aid was issued to Francis D. Clarke and M.G. Foster
- 1884** Lismore’s first phone, Royal Hotel to Post Office.
- 1904** Hulsemeyer, Germany, patents first ‘radar’ system. Govts not interested.

Norway to Become First Country to Switch Off FM Radio in 2017

Steely Dan, the jazz-rockers who scored a hit in 1978 with their single *FM (No Static At All)*, would not be pleased. In what will likely be the first of a global transition to digital radio, Norway has announced it will switch off its FM band, becoming the first country to do so. Norway will start turning off FM radio on January 11, 2017, and plans to stop transmission of the last FM signal to the country’s northernmost regions by Dec. 13 of that year.

The announcement, made by their Ministry of Culture, makes Norway the first country to do away entirely with FM radio. The move is intended to save money and allow a full transition to digital radio, which Norway argues will give listeners “access to more diverse and pluralistic radio content and enjoy better sound quality and new functionality.”

In its statement, the Norwegian government said the cost of transmitting national radio channels through the FM network is eight times higher than via the Digital Audio Broadcasting (DAB) system, the standard digital radio technology used across Europe. By shutting off FM, Norway’s national radio channels will save more than \$25 million a year, according to official figures “releasing funds for investment in radio content,” argued minister of culture **Thorhild Widvey**.