

The **NASA** Journal

VOLUME LX NUMBER 6

JUNE 2020



North American Shortwave Association – America's Shortwave Broadcast Club

Quality Radio Equipment Since 1942



GP-5/SSB Gen3

The CountyComm GP-5/SSB Gen 3 provides serious HF communications monitoring in a unique form factor and at a great price. The radio covers AM, shortwave 1700-30000 kHz and stereo FM. Unlike most radios in this price category, the GP-5/SSB provides LSB and USB single sideband reception. It has a *Easy Tuning Mode* that scans all frequencies without consuming memory spaces. So you get quick access to all local stations. There are also 550 regular memories (100 AM, 100 FM, 250 shortwave and 100 for SSB) available for your favorite stations. Another great feature is its removable external directional LW/MW ferrite



antenna that clearly enhances AM band reception. This radio employs DSP technology, improving clarity and tone quality. There is an adjustable sleep timer. Requires three AA batteries (not included). It also has a 5V mini-USB DC input jack when using rechargeable AA batteries. Includes: LW/MW bar antenna, stereo ear buds, pouch, belt clip, wire antenna and manual. With effective SSB reception and compact size, it is a strong choice for preparedness applications. This latest Gen3 version adds colored keys, improved whip antenna, louder audio and longer run time. 2.1 x 6.3 x 1 inches 4.5 oz. Light gray case.

GP-5/SSB Gen3 Order #0907 \$89.95

Optional AC adapter for GP-5/SSB Gen3. SKWVP Order #6434 \$14.95

Optional USB CBL A Power/Charging Cable. USB CBL A Order #2478 \$4.95

Replacement FM/SW telescopic whip antenna. TELS WHIP Order #6527 \$7.95

Your CountyComm GP-5/SSB Gen 3 will also include our informative two page *Welcome to World Band Radio* quick-start guide.

eton ELITE FIELD



The Eton Elite Field keeps you in touch with the world wherever you are. It receives AM, FM and complete international shortwave coverage from 1.7 to 30 MHz. There is a built-in digital clock timer. This radio features RDS - Radio Data System that enables FM broadcasters to deliver more than just an audio signal, but also to transmit alphanumeric data, like the station's call letters, style of music, song title, artist and more. It can even display the temperature. Plus, its wide-narrow bandwidth selection improves audio fidelity and minimizes noise. Separate Bass & Treble knobs tailor the sound to your taste. All this, and the radio's larger size combine to be one of the best sounding portables available today. The memory system stores 50 stations: 10 AM, 10 FM, 10 SW-1, 10 SW-2 and 10 SW-3. The AM band can display in 9 or 10 kHz increments. There is a Local/OX switch and battery status icon. Display brightness may be set to Low, Medium or High. Antenna jacks are provided for both MW or SW/FM antennas. Operates on four D cells (not included) or supplied AC adapter. This latest version adds Bluetooth® technology to allow you to wirelessly play your Bluetooth® music player, Smartphone or other device through the radio! 12.4 x 6.9 x 3".

Elite Field Order #0196 \$129.95

Included **FREE** with your Elite Field for a limited time.



Optional deluxe carry bag for Eton Elite Field will be included free with your Elite Field for a limited time. A \$69.95 value!



Your Eton Elite Field or Elite Executive also includes our informative two page *Welcome to World Band Radio* quick-start guide.

We have done some organizing in our archives and are pleased to offer an interesting assortment of **used books, manuals and radio literature**. Here is an opportunity to obtain *original* owner's manuals, service manuals, brochures, catalogs and books. All of the manuals, literature and most books may be viewed by going to our home page and selecting **(used) Photos**, then:

B Radio Books, C Radio Catalogs, D Radio Manuals

WORLDWIDE LISTENING GUIDE

By J. Figliozzi

Modeled on the author's popular *Worldwide Shortwave Listening Guide*, this book covers all of today's formats: live on-demand, podcast, satellite, internet, digital, analog, AM, FM, shortwave and Wi-Fi. Learn what can be heard how, where and when! Spiral bound 9th Ed. 192 p. ©2019. List \$29.95. Order #1044 \$28.95



WORLD RADIO TV HANDBOOK 2020

This long established publication is filled with schedules, frequencies and addresses of shortwave broadcast stations. Organized primarily by country. Also includes a by-frequency listing of shortwave broadcast stations, plus receiver reviews. 74th Edition. ©2019 672 p. List \$49.95. Order #2020 \$44.95



2019/2020 GUIDE TO UTILITY STATIONS

By J. Kilgintuss

The world's biggest and best guide to non-broadcast stations in the range of 0 - 30 MHz. With 8,800 listings in aero, maritime, military, diplomatic, time stations and more. Covers SSB, CW, AM and exhaustive RTTY. Highly recommended. 30th Edition ©December 2018. 550 p. Order #6775 \$59.95



SHORTWAVE RECEIVERS PAST & PRESENT 1942-2013

By F. Osterman. A comprehensive guide to over 1700 shortwave, amateur and commercial communications receivers (plus 1200 variants) made in the last 70 years. With 1800 photos and information including: coverage, circuit, display, features, performance, new & used values (for most), reviews, etc. Over 360 manufacturers are represented. Become an instant receiver expert. Hard bound Fourth Ed. Second Printing. ©2014 URR. 800 p. Order #0004 \$48.95 Special Sale Price \$39.99



Quality Communications Equipment Since 1942

Universal Radio, Inc.
651-B Lakeview Plaza Blvd.
Worthington, OH 43085
800.431-3939 Orders & Prices
614.866-4267 Information

dx@universal-radio.com
www.universal-radio.com

Prices and specs are subject to change. Prices shown are after mfg's discounts. Returns are subject to a 15% restock fee.

www.universal-radio.com

Please stop by for a look. We offer a wide selection of new and used shortwave equipment, antennas and books.

UNIVERSAL BUYS RADIOS

Call, email or write and tell us what you have to sell. We can provide a quote, subject to inspection.

+ U.S.A. flat-rate shipping: Under \$50-\$5.95, \$50-\$100-\$8.95, \$100-\$500-\$9.95, \$500-\$1000-\$14.95. Except Alaska, Hawaii and Puerto Rico.

CATALOG

Phone or email for our informative 116 page print catalog.

In This Issue

N4CAA Notes	4
Musings.....	6
Publisher's Corner	10
Listening Review	11
International Broadcasting.....	16
Shortwave Center.....	18
Listener's Notebook.....	30
Pirate Radio Report	40
Contributors' Page.....	42
Loggings.....	43
On the Short Waves.....	53
Index	54

NASA Notes

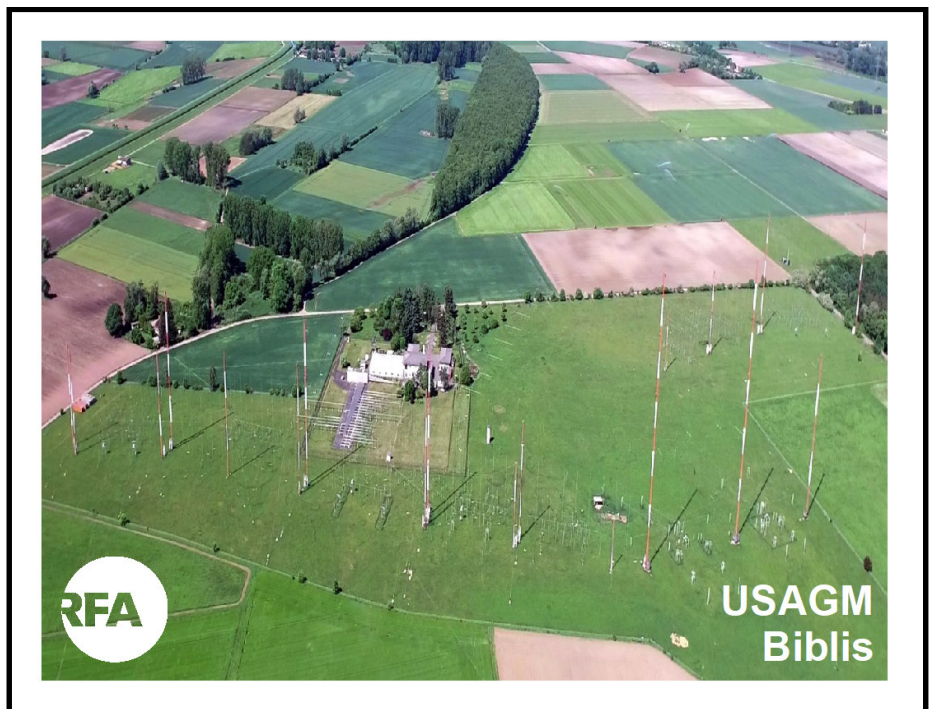
Richard A. D'Angelo • 2216 Burkey Drive • Wyomissing, PA 19610 • rdangelo3@aol.com

The coronavirus situation continues to dominate the news cycle. International and domestic shortwave transmissions are dominated with news about the coronavirus. Since our hobby is one that tends to be practiced indoors and alone, social distancing has always been practiced by SWL's while perusing our listening hobby. Stay safe and comfortable while this pandemic is with us. Enjoy the radio hobby and stay healthy!

For this month's cover design John Herkimer has reached deep down into his bag of tricks to unearth Egypt's rarely heard (these days) international shortwave broadcasting station, Radio Cairo. For many of us, Radio Cairo was a station well heard on the shortwave bands but in recent year's this international broadcaster has had its share of problems putting a signal on the bands. Hopefully, they will put out a decent signal once again sometime this year; keep checking Listeners Notebook for the latest information about Radio Cairo. The QSL card at the top left side of the cover was one of the early entries into my QSL album and brings back many good memories.

From A.J. Janitschek, Director of Program & Operations Support at Radio Free Asia ("RFA") we learn that RFA is releasing its sixth QSL card in the series highlighting USAGM transmitter sites used for the station's radio programming. Their programs also broadcast from these USAGM sites: Kuwait, Lampertheim, Saipan and Tinian.

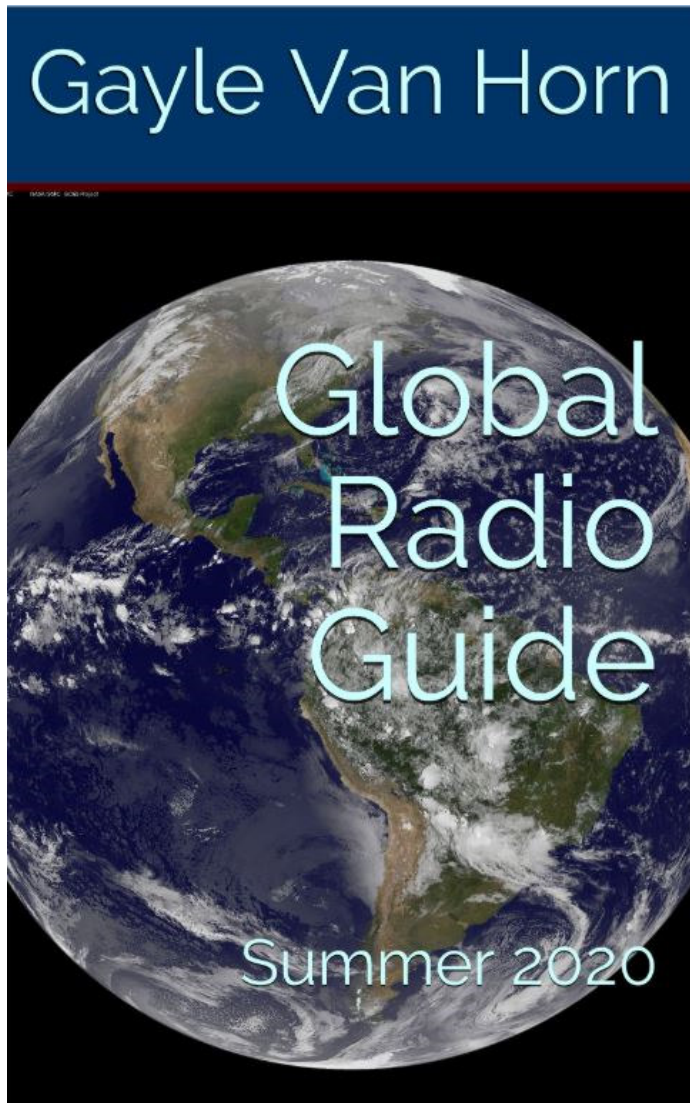
USAGM Biblis is one function of the USAGM's Germany Station and is an integral part of USAGM's global satellite interconnect system carrying RFA programming where needed. This is RFA's 73rd QSL and confirms all valid RFA reception reports May – August April 2020. RFA encourages listeners to submit reception reports. Reception reports are valuable to RFA as they help us evaluate the



signal strength and quality of our transmissions. RFA confirms all accurate reception reports by mailing a QSL card to the listener. RFA welcomes all reception report submissions at <http://techweb.rfa.org> (follow the QSL REPORTS link) not only from DXers, but also from our general listening audience. Reception reports are also accepted by email at qsl@rfa.org and by mail to: Reception Reports, Radio Free Asia, 2025 M. Street NW, Suite 300, Washington DC 20036.

Teak Publishing announced the release of its Global Radio Guide ("GRG-14"), 14th edition

(Summer 2020) e-book, by Gayle Van Horn, W4GVH. The GRG-14 has brought back the



popular SDR Buyers' Guide and expanded their coverage of SDR information, by popular demand. SDR coverage includes direction finding HF stations using the SDR.hu network of radios by Mike Chace-Ortiz. Tom Witherspoon takes an AirSpy HF+ Discovery into the field and shows how to operate a portable receiving station. There is also an introductory article on Software Defined Radios, an updated SDR buyers guide, and an in-depth equipment review on the new SDRPlay RSPdx SDR. If you have a shortwave radio receiver or Internet connection, and this unique radio resource, you will know when and where to listen to your favorite radio broadcast station. This publication will have wide appeal to amateur radio operators, shortwave radio hobbyists,

news agencies, news buffs, educators, foreign language students, expatriates, or anyone interested in listening to a global view of world news and major events as they happen. The 14th edition of the Global Radio Guide e-Book is available worldwide from Amazon and their various international websites at <https://www.amazon.com/dp/B087YRMYZS>. The price for this latest edition is US\$8.99. Since this book is being released internationally, Amazon customers in the United Kingdom, Germany, France, Spain, Italy, Japan, India, Canada, Brazil, Mexico and Australia can order this e-Book from Amazon websites directly servicing these countries. Customers in all other countries can use the regular Amazon.com website to purchase this e-Book.

Don't forget to obtain your copy of the annual Domestic Broadcasting Survey-22 ("DBS-22") at www.dswci.org/dbs. As usual, Anker Petersen informs us that DBS-22 is free of charge for any DX-er to download for his/her personal use. The Domestic Broadcasting Survey is divided into three parts: Part 1: The Tropical Bands Survey covering all ACTIVE broadcasting stations on 2300 - 5700 kHz, including clandestines. Part 2: Domestic stations on international shortwave bands above 5700 kHz broadcasting to a domestic audience. Part 3: Deleted frequencies between 2 and 30 MHz which have not been reported heard during the past five years, but may reappear.

As the world slowly returns to normal, the 2020 Madison-Milwaukee Get-together for DXers and Radio Enthusiasts will be a great event to attend. It is scheduled to be held on Saturday August 15, 2020 from 1:00 until 9:30 PM local time (come when you can and leave when you must) at Lake Farm County Park Shelter #1, [4330 Libby Road, Madison, WI 53711](https://www.wisconsin.gov/4330-Libby-Road-Madison-WI-53711). Flashsheet editor Mark Taylor will be the host this year. An assortment of snacks and soft drinks will be provided

during the event. If you prefer an alternative beverage please bring your own (but don't bring any glass containers-- they are banned in the park). The group photo will take place in late afternoon, so bring along your camera. The Madison-Milwaukee DX Get-together has been held on the third Saturday in August in every year since 1994. The purpose from the beginning has been to promote camaraderie among all DXers and radio hobbyists-- "making new friends and renewing old friendships". This is an all-band event, and brings together a diverse group of hobbyists who have one thing in common-- a love of radio. A highlight of every Madison-Milwaukee get-together has always been the dinner (participation optional). As of now we have not decided on a location, so keep tuned for details. Dinner is followed by a night session of DX and camaraderie until 9:30 PM when we need to vacate the park or the nice officers will evict us. Mark appreciates advanced RSVP to markokpik@gmail.com or you can call him at 608-225-2690. If you have a presentation,

display or would like to offer assistance, please contact him.

From the Worldwide DX Club bulletin, we learn from the European DX Council ("EDXC") that this year's EDXC Conference (which was originally scheduled to be held in Bucharest in September 2020) will be postponed. Chrissy Brand, the Secretary General, and Christian Ghibaudo, the Assistant Secretary General, mention that events including conferences and festivals may not be permitted in September in Romania (and elsewhere) due to physical distancing requirements. Restaurant and tourist attractions may not be open. Most importantly, they would not want to hold a conference that their members do not wish to attend for fear of their and others' health. They indicate that the EDXC will rearrange for the conference to take place in Bucharest in September 2021.

That's it for this month. Enjoy this month's edition of the JOURNAL; it's another good one.



Unity and Friendship

Musings

Jerry Lineback • 4422 Sierra Del Sol • Paradise, CA 95969-8116 • jalinebk@gmail.com

Please e-mail your Musings, preferably as MS Word attachments, to the address in the column masthead. Please note that the new deadline for contributions to the July issue is June 17, 2020.

Jerry Alice Lineback, jalinebk@gmail.com, Paradise, CA 95969

Not much going on here, reopening is beginning. My 250 feet of wire has improved reception here so I should listen more. We are both healthy, that is the important thing these days.

Eric Bueneman, 631 Coachway Lane, Hazelwood, MO 63042-1347

As I write this, the Shelter-in-Place order in my locale is at the end of the sixth week. For me, that has meant a lot more time spent at the dials. This is an unprecedented time in our history; broadcast radio was still a year away when the Spanish Influenza pandemic hit the United States in 1919. It is amazing how far we have come in just a century.

While in the shack, I was reading Ed Stroh's Musing in the April Journal; I thought I would tell you my radio story. As a 10-year-old in late 1976, I discovered that I could listen to medium wave broadcasts from outside the Saint Louis area at night. The first out-of-town signal I discovered was WBBM Chicago on 780 kHz. During sixth grade (1978-79), I discovered that I could also hear a few 50 kW Chicago stations, like WMAQ (now WSCR) on 670 kHz and WLS on 890 kHz during the day. I could even hear WGN on 720 kHz, even though I had a 1,000-watt daytime-only station just 50 miles away: KWRE 730 kHz in Warrenton, MO. I also discovered more out-of-town medium wave signals, like WLW 700 kHz in Cincinnati, WSM 650 kHz in Nashville (home of the Grand Ole Opry), WSB 750 kHz in Atlanta and KOA 850 kHz in Denver. On the weekends, I could stay up late enough to hear the truckers' shows from WBAP 820 kHz from Fort Worth or WWL 870 kHz from New Orleans. The 50 kW medium wave stations also had a lot of sports, like Detroit Tigers baseball and Red Wings hockey from WJR 760 kHz, Chicago White Sox baseball (announced by Harry Caray) on WMAQ, Atlanta Braves baseball and Hawks basketball on WSB, Cincinnati Reds baseball on WLW or Minnesota Twins baseball and North Stars hockey on WCCO 830 kHz out of Minneapolis. Saint Louis' 50 kW blowtorch, KMOX 1120 kHz, had Cardinals baseball and American football (European football is referred to as soccer in the United States), Blues hockey and University of Missouri basketball and American football, as well as overnight middle-of-the-road music, hosted by John McCormick on weeknights and Tony Oren on the weekends.

Most people of my generation had already discovered FM radio by that time; many listened to K-She 95 (KSHE at 94.7 MHz) or 98 KSLQ (KSLQ, now KYKY, at 98.1 MHz). A few still listened to AM, like KXOK (now KYFI) on 630 kHz and KWK (now KXFN) on 1380 kHz.

Shortly after I entered eighth grade in 1980, I discovered something different on 600 kHz. Even with a local 1 kW station on 590 kHz (WRTH Wood River, IL, now KFNS), the signal featured a variety of music, news and commentary. It took a few days to find out that the programming came from Radio Moscow's North American service. The programming was relayed by a 150,000-watt facility in Urbano Noris, Cuba. The schedule included the North American service until 10:00 p.m. Central U.S. time, Radio Moscow World Service from 10:00 to 11:00 p.m. Central U.S. time, and the Voice of Cuba (produced by Radio Havana Cuba) from 11:00 p.m. to 4:00 a.m. Central U.S. time. It was at that point that I set my mind on getting a shortwave receiver. I still tuned around to U.S. stations; I was tuned to WABC 770 kHz from New York when I heard the news that John Lennon was shot on December 8, 1980. Toward the end of 1980, I was hearing audio image transmissions from shortwave broadcasts above 1600 kHz on one of my portable radios from throughout the Americas. I was hearing Radio Canada International, WYFR, VOA Greenville and HCJB just above 1600 kHz.

In October 1981, I got my first shortwave receiver, a Realistic DX-60 portable receiver. I still have this receiver; it features AM, FM, the Citizens' band and three shortwave bands. I started hearing BBC World Service, Deutsche Welle, Radio RSA, Radio Nederland, Kol Israel, Radio Japan, Radio Korea and Radio Peking, in addition to RCI, VOA, WYFR and HCJB. I also began building homebrew antennas, starting with one made from a broken hacksaw blade and speaker wire; I heard the Voice of Nigeria on 15120 kHz using that antenna. The 25 MHz (11 meter) broadcast band was still used; I heard Radio RSA on 25790 kHz and VOA Greenville on 26040 kHz. Before I finished my first year of DXing, I began seriously DXing the medium wave and FM broadcast bands as well as broadcast television. In July of 1982, I got my monitor call from the WDX Monitoring Service: KDXØSTL. The "K" in the call sign stands for my location west of the Mississippi River and the "STL" for the Saint Louis metropolitan area. The following year, I joined the World Listening Service with the call WLS5M0. In 1984, having taken up casual Public service monitoring, I got the call KMOØCN from CRB Research. I joined my first club, the old ASWLC, in May 1982; I joined NRC that August. It was through NRC that I met Saint Louis DXers Terry Klasek and Rich Eddie; we had a local group called SLIDX (Saint Louis International DXers); I met antenna experimenter Bob Flick through that group. I learned a lot about the hobby from Rich Eddie.

In October 1982, I upgraded to a Realistic DX-200 tabletop communications receiver; I began DXing the Amateur Radio bands. The Hams I QSLed encouraged me to go for my license; I put that on the back burner while I was in college. In June 1985, I upgraded again; this time to a Realistic DX-400. That fall, I started college as a Communication Arts major; I began helping out the staff at KCFV 89.5 MHz Ferguson, MO, becoming a DJ in the fall of 1986. In August of 1988, I relocated with my family to Woodstock, GA; I built another homebrew antenna for shortwave radio from telephone wire and put it in the baseboards of my bedroom. During that time, I volunteered for a month at WRFG 89.3 MHz in Atlanta before getting lured away to a master control operator's job at WFTD 1080 kHz in Marietta. I even worked briefly at 16-watt WGHR 102.5 MHz at Southern Polytechnic State University (now Kennesaw State University-Marietta) doing an Oldies show. When I relocated to Marietta in June of 1991, I made another homebrew antenna for shortwave out of speaker wire and a metal coat hanger; I heard plenty of DX with that antenna. I kept that antenna when I returned to Hazelwood at the end of June 1992. In 1994, the string on the upper tuning cylinder of the DX-200 snapped; I used the DX-400 for both shortwave and medium wave DX until adding my present Sangean ATS-803A in October 1995; I bought that from local DXer Tony Jasper. In 1997 the DX-400 blew; I switched to a General Electric Superadio III (which I bought in 1994) for medium wave DX. Later in 1997, I ditched the homebrew coat hanger antenna for an MFJ-1778 G5RV antenna. I bought the National NC-60 Special at a Hamfest in August 1998; I use that for some medium wave and shortwave DXing. My main AM broadcast band rig in the shack, the Yaesu FRG-7, was acquired at a Hamfest in January 2011; I've also used it for shortwave DX.

In late 1991, I began studying for my Technician class Amateur Radio license. The Morse Code requirement for that class of license had just been dropped, and that motivated me to study. I passed the first exam required for the license at a Hamfest in Washington, MO in July 1992; I passed the second exam needed for the entry level license at a Hamfest in Saint Charles, MO the following month. In fact, I passed the exam the day before beginning my second tour of duty at KCFV 89.5; I received my license in October 1992 with the call sign

NØUIH. I learned twelve characters of Morse Code under the tutelage of one of the professors in the School of Engineering at Southern Illinois University Edwardsville before the Morse Code requirement for all license classes was dropped; I upgraded to a General Class license in June 2007 by passing the written exam on my second try through the Cliff Cave Volunteer Examiner team, which gives license exams at the Cliff Cave branch of the Saint Louis County Library in Oakville, MO. In May 2012, after taking a course through one of the local Amateur Radio clubs, I upgraded to an Amateur Extra Class license, only needing one try to pass the exam, also administered by the Cliff Cave Volunteer Examiner team.

In late 2018, after hearing lectures on the topic at the International Radio Club of America convention in Saint Charles, MO, I began taking DXpeditions to parks and conservation areas in the Saint Louis region. I homebrewed a 30-foot longwire for portable use on the shortwave bands; I bought a Tecsun PL-600 for shortwave DXing away from the shack. Since November 2018, I've been on two DXpeditions to Babler State Park in Wildwood, MO, Marais Temps Clair Conservation Area in Black Walnut, MO and Sioux Passage County Park near Florissant, MO, along with single DXpeditions to Lincoln Shields Recreation Area in West Alton, MO, James S. McDonnell County Park near Saint Ann, MO, Creve Coeur County Park in Maryland Heights, MO and Pere Marquette State Park near Grafton, IL. This year's DXpedition season has been delayed due to the COVID-19 pandemic.

I've been DXing the shortwave bands since October 1981, the medium wave broadcast band since December 1981, the FM broadcast band and analog television since April 1982, the NOAA Weather Radio band (162.4-162.55 MHz) since January 2001, and digital TV since September 2005. Today, my main home shack features Sangean ATS-803A, National NC-60 Special and Yaesu FRG-7 communication receivers for shortwave and medium wave DX, a Kenwood AR-304 AM/FM/FM Stereo receiver with filter modification for FM broadcast band DX, and a Uniden Bearcat BCD996P2 for NOAA Weather Radio DX and VHF/UHF analog and digital Public Service band monitoring, two Zenith DTT-901 digital TV tuners, one hooked to a 1984-built Samsung 19-inch color TV and the other to a 1999-built Daewoo 13-inch color TV for TV DX, and a Uniden Bearcat BC980SSB AM/SSB Citizens' Band radio for general talking (Hams call it "rag chewing") and monitoring the truckers on Channel 19 (27185 kHz). I've built homebrew antennas for shortwave (a 150-foot dipole in the attic and a 30-foot outdoor longwire) and the Citizens' Band (an inverted "V"). For medium wave DX, I have a Worcester Electronics Space Magnet II ferrite core loop hooked to the FRG-7; I use an Apex 303WA-2 vertical antenna, hooked to the National NC-60 Special, for some shortwave and medium wave DX; I bought the Apex in August 2018. For FM and TV DX, I use a Channel Master CM-3020 VHF/UHF Yagi I bought in the summer of 2016; the antenna is 28 feet above ground level. For the Public Service and NOAA Weather Radio bands, I use a Radio Shack discone antenna I bought in 2004; that antenna is 32 feet above ground level.

This hobby also led to a 22-year broadcasting career; most of my career was in the Saint Louis area. In addition to the aforementioned stations, I worked as a studio engineer and staff announcer at WGNU 920 kHz Granite City, IL (now licensed to Saint Louis, MO) in 1996 and '97, studio/remote engineer and staff announcer at WFUN-FM 95.5 MHz Bethalto, IL from August 1997 to June 1999, and as a studio engineer, DJ (evening, fill-in and morning), Public Service Director and hockey coverage coordinator at WSIE 88.7 MHz Edwardsville, IL from

May 2000 to July 2009. I briefly worked at KDHX 88.1 MHz Saint Louis, MO taking pledges during the June Membership Drive in 2015.

In addition to NASWA, I'm also a member of IRCA (where I edit Eastern DX Roundup and SportChannels IRCA), WTFDA, ARRL and two local Amateur Radio clubs, the Saint Louis and Suburban Radio Club and the Lewis and Clark Radio Club. If there's one thing 38 years in this hobby has taught me, it's being patient when hearing the DX. This is especially important in all areas of life during this unprecedented time.

73 and good DX from the Florissant Valley Dial Twister.

Thanks to our contributors, 73 de JAL



Publisher's Corner

Richard Cuff • P.O. Box 3292 • Allentown, PA 18106 • hq@naswa.net

Distribution changes for the Flashsheet

I've recently invested in a software tool that allows me to easily leverage my spreadsheet used for membership management to also manage the outbound e-mails used to send over the PDF Journal. We're going to do the same thing with the weekly Flashsheet, which then means that I'll be sending out the Flashsheet instead of Rich D'Angelo. The timing should be the same -- late Sunday / early Monday -- for mailing it out.

This allows us to marry up NASWA membership status with Flashsheet status, so we don't have any "freeloaders" receiving the Flashsheet after their NASWA memberships expire. It also saves us work because this way Rich D'Angelo doesn't have to separately manage the list of folks receiving the Flashsheet, and this way members have "one-stop shopping" -- they communicate with one person -- me -- to manage their NASWA membership and their Flashsheet participation.

We will do the cutover with the Flashsheet dated June 21st, 2020.

Welcome New & Returning members!

We continue to see new folks joining the club, both for the e-Journal as well as the traditional paper membership. Nearly all new members have joined via PayPal. Welcome to NASWA! Folks are finding that the club is a good way to get an overview for what broadcasting remains on shortwave and what people are hearing, as reported in the loggings. Nearly all our new members are also taking advantage of one of our electronic information resources as well - the weekly Flashsheet, the e-mail based group, as well as our Facebook presence. So if you see a name you don't recognize in the *Musings* column, that might be one reason why!

I encourage all members -- new as well as seasoned -- to take advantage of the *Musings* column to post technical questions that other members might be able to answer, as well as to discuss the ways that you leverage technology in your listening, or unusual things you've heard while physically distancing during the COVID-19 lockdowns. We're a friendly and patient group, even folks that have been listening to shortwave

for decades, so don't worry if your question is too basic.

The *e-Journal* is available to paper-based members at no additional cost

So far I have not seen any significant postal interruption for members in the USA and Canada, though there are a couple overseas locations where we have members that are not currently receiving overseas mail. Where relevant I have converted these members over to the *e-Journal* so they can keep tabs on shortwave happenings. All members who use e-mail are encouraged to receive the *e-Journal* in addition to their paper memberships -- it saves a few days on distribution time, and I've heard from longtime NASWA members that they're enjoying the *e-Journal* especially on tablet devices (iPads, Amazon Fire tablets, Android Tablets) more than they thought they would. If interested, let me know and you can give the *e-Journal* a try.

Shortwave listening as a gateway to other listening platforms

One of the habits I try to maintain is to get out and walk every day. Sometimes I do so in conjunction with my travels, sometimes it's in my own neighborhood. Since the time of day when I get out and about varies widely, I typically listen to spoken word audio that's available "on demand" via streaming / podcast. Shortwave has a role in this -- because it's a way that I can "sample" programs that I might want to listen to later.

How does shortwave listening serve to augment what you listen to on other platforms? Might make for a good *Musing*...just sayin'.

Here's to another month of good listening / great DX!

Richard Cuff / Publisher – Business Manager


Listening Review

Alan Roe • 33 Athara Road • Teddington, TW11 9PA, United Kingdom • alan-roe-swl@randa33.co.uk

Welcome to Listening Review for June 2020. Readers may recall that I was planning to return with this column in August – that was before the Covid-19 lockdown, and I do hope that everyone is, and remains, safe and well. For myself, finding that I now have more time available during this time, I return earlier than expected with another edition. My ***Music on Shortwave*** (in English programs) listing was included in last month's NASWA Journal and meanwhile the more extensive Music on Shortwave (in English and selected other languages) has been uploaded to the files sections of the

NASWA iog mail list and the NASWA Facebook page, and will be updated when there are sufficient changes to warrant it, and I can forward a copy of the pdf file to anyone who has not signed up to either.

Next I have some program news. I hope that some of you caught the ***WBCQ's Big Broadcast of 2020*** conceived and produced by Bill Tilford on 5 May. Unfortunately, 7490 kHz wasn't making the trip here at 2100UT that night, however I did listen via the Tune-In webstream of WBCQ. It was a most enjoyable program and I am happy to report

that it will be repeated on 4 June. Here is Bill's press release:

"Due to popular demand, **WBCQ's Big Broadcast of 2020** will be rebroadcast on Thursday, June 4 from 10pm to 11pm EDT (0200-0300 UTC Friday, June 5) on three frequencies: **5130, 6160 and 7490 kHz**. This later hour should make the program more accessible to those listeners down south and out west who were unable to bring in 5130 and 7490 during daylight hours the first time, and as a special bonus, we are adding 6160 kHz as a sort of test drive for music programs, so even if you caught the broadcast the first time around, please try us out on 6160 this time and let us know how it did in your area.

"Whether you had bad propagation last time, were away from the radio searching for toilet paper or just want a second helping, come shake off those COVID-19 blues with an hour of great music from Area 51, Marion's Attic, Uncle Bill's Melting Pot, From the Isle of Music, beHAVior Night and the Lost Discs Radio Show.

"The hosts thank Allan and Angela Weiner for donating the airtime and The Overcomer Ministry for granting us TOM's regularly-scheduled time slot for this event."

Meanwhile, **Channel 292** has expanded its frequency usage to include 3955 kHz (with plans to also use 9765 kHz in forthcoming months). With 3955 kHz now being used come increased airings of some favourite stations. The schedules for 3955, 6070 and 7440 kHz are too complex to detail here and frequently change as new stations/programs are aired, so I do encourage you to check their webpages regularly at <https://www.channel292.de>. However, it is worth mentioning that **From the Isle of Music** and **Uncle Bill's Melting Pot** are testing on 7440kHz, and **Encore Classical**

Music is testing on 3955 kHz, (check the website for times during June of all these programs) and some new programs now airing include such offerings as **R Northern Europe International** (with the latest pop and dance music from Norway, Sweden, Denmark, Iceland, Finland, the UK and Ireland on 6070 kHz, although days and times are currently variable); **Seventies Berlin** (Saturdays 1900 UTC on 6070), and some very good news that **Voice of the Report of the Week R Int** comes to Channel 292 (Tuesdays 1000 and 1600, and Saturdays 1500 UTC, all on 6070 kHz).

BBC World Service

BBC World Service in English is heard quite well from 1700-1800 UTC each day with a choice of two separate program streams being heard very well at my location. Firstly, on 7445 kHz via Madagascar is the East & South Africa stream, and on 6195 kHz via Oman is the Middle East stream.

On Wednesday 13 May, the **E&S Africa** stream started, as always, with the **News** which was followed at 1706 by **Focus on Africa**. I don't listen as often as maybe I should to this program, but when I do, I always find it of interest with its in-depth reporting of events in Africa. This edition started with the news that Lesotho had confirmed its first case of the Covid-19 virus, and in so doing became the final country in Africa to do so. This was despite the fact that the country is surrounded by the Republic of South Africa with what was described as a very "porous border". There was an interesting interview with Mamello Morrison a member of Lesotho's National Emergency Command Centre looking at how Lesotho was gearing up its response in light of this development. This was followed by a report on the serious psychological impact the coronavirus crisis has on workers who have lost their jobs – a story as relevant

everywhere as it is in Africa. Following a news roundup of other events around Africa (in Guinea, Cameroon, Gambia) and a short sports report was a feature report comprising an interview with Julie Owono of *Internet without Borders* who has become a member of Facebook's new "Oversight Board" discussing its role in moderating controversial content on Facebook. The programme ended with an interview with Malawian singer Hazel Mak, and play of her enjoyable new song *Serenade* from her new album *Unorthodox*.

At 1732UT was a fascinating drama ***Miriam and Youssef***. This was episode 3 of a "ten-part drama series charting the turbulent decades leading up to the founding of Israel". Here is the description from the BBC web pages of this series:

"Miriam and Youssef is told from the viewpoints of two former neighbours: Miriam, a Jewish refugee who emigrates to Palestine, and Youssef, a Palestinian Arab. Set between 1917 and the foundation of the state of Israel in 1948, their lives are intertwined with real-life historical characters and events.

"While Miriam is determined to make a home in this new land for herself and her fellow Jews, Youssef, the son of the leader of a local village, is offered work at the British Mandate offices. But as politics and religious forces swirl around them, the family and community loyalties and beliefs of these two hopeful young people are challenged. As conflicts between Jews and Palestinians increase, both become involved with violent resistance movements. But the future is unpredictable: might they both eventually find a way to live in peace?

"At the heart of the series is the city of Jerusalem, seen during the three decades of the British Mandate. The drama also features

real-life figures including David Ben-Gurion, the Grand Mufti of Jerusalem and American intellectual Rabbi Judah Magnes, whose lives intersect with the core fictional characters."

The narrator's recap at the start of this episode sets the scene:

"Youssef has begun to work for the British thanks to his patron, Harry Lister. As a result, he now finds himself in conflict with his family and his village. Miriam has joined a kibbutz, but this new kibbutz is not welcomed by the local Arab population."

This was an interesting "full-cast" drama. There is little enough drama available on shortwave and I highly recommend this one. The series continues throughout June, and the earlier episodes can be found on the BBC website at <https://www.bbc.co.uk/programmes/w13xtv38> with episodes remaining available for at least a year.

Also on the **E&S Africa** stream during the 1700-1800 UTC slot, on Saturdays at 1732 UT is a fascinating documentary series called ***Spitfire: The People's Plane*** comprising ten 20-minute episodes detailing the building of the Spitfire. I missed the shortwave broadcasts on 2 and 9 May, but caught up with the series via the BBC website.

Here is the description from the BBC web pages of this series:

"Before a plane could save a country the people had to build it. This is the story of how the beautiful and deadly icon of resistance was built against extraordinary odds.

"The legend of the Spitfire rests on the reputation of the pilots who fought the Nazis over England in the summer of 1940 - but their success was based on the sacrifice of thousands of ordinary women and men.

When a community comes together in a shared endeavour it can win a battle and save countless lives - a theme that resonates as powerfully today as it did 80 years ago. When German bombs hit the Spitfire factory building, the plane production ground to a sudden halt. As British resistance against the Nazis hung in the balance, an extraordinary plan was hatched. The factory wouldn't be rebuilt. Instead, ordinary people in bus depots, car workshops and even a laundry would build the Spitfire piece by piece.

"Across ten episodes we celebrate the heroes who put their communities on the frontline of war and looked to the sky as their Spitfires fought for the future of civilisation."

The series continues throughout June. The earlier episodes can be found on the BBC website at <https://www.bbc.co.uk/programmes/w13xtv79> with episodes remaining available indefinitely.

Returning to my shortwave listening on Wednesday 13 May, the **Middle East** stream on 6195 kHz (which I recorded and subsequently listened to) started with the **News** (same as **E&S Africa** stream in parallel) which was followed by **Outlook** at 1706 UT. Outlook is described as a program featuring the "*lives of extraordinary people from all across the globe*". This edition was sub-titled ***Sacrificing my sexuality to be a black role model*** and was presented by Jo Fidgen. It featured singer and actor Francois Clemmons who was described as best known for a role as *Officer Clemmons* in a US children's TV series "Mister Rogers Neighborhood" and I assume that he is more likely to be familiar to an American audience. He has just published his autobiography "Officer Clemmons: A Memoir", and this episode of Outlook featured an extensive interview with the actor.

Presenter: "When he joined the show in 1968, it was very rare to see a black person in a regular role on children's TV and he and host Fred Rogers, the show's host, were keen to make the point that all people are equal regardless of colour. They did a very famous scene where they showed a white man and a black man sharing a paddling pool to make their point. But at the same time, Francois was hiding his homosexuality, which was a taboo too far at the time. [...]"

Clemmons then talks about how he found himself become a role model for young African-American children, but he was told that he couldn't continue to be successful in the show if he was openly gay. He had to choose between his sexuality and his TV career, and he felt at the time that his importance as a role model was so great that he chose the latter. The program then covered his later life, post TV, as a singer and his role in the Harlem Spiritual Ensemble

It was a fascinating program. This was not an episode I would necessarily have chosen – after all, I had no knowledge of either him or the TV program in which he rose to fame, and the subtitle would not ordinarily have stood out to me as a "must-hear" program – however I was immediately pulled into the program by the presenter Jo Fidgen, who immediately made you want to continue to listen to what Francois Clemmons had to say, and he was a most engaging interviewee. The episode remains available on the BBC website at <https://www.bbc.co.uk/programmes/w3cszdr9>.

Just room to mention ***Witness History***, which followed Outlook on 6195kHz at 1750UTC. This long-running series rarely disappoints and features interviews and audio from people who lived through historic events. In today's episode we heard from Japanese politician Yoriko Madoka who campaigned for the legalisation of

contraception in Japan and who fought against sexism and male dominance in Parliament. There are hundreds of episodes available on the BBC website, and many are grouped into themes as diverse as Scientific History, African History, World War One and two, Iranian History, The Fall of the Berlin Wall, and Environmental History, and many more. The Witness History website is at <https://www.bbc.co.uk/programmes/p004t1hd>

It's not always easy to determine all the scheduled airings of BBC World Service programs across the different regional streams, however the above programs are scheduled (as far as I can determine) as follows, and hopefully some of these will propagate your way:

Focus on Africa (Three editions daily)

1506 Mo-Fr: 9410-sla (E & S Africa)
 1706 Mo-Fr: 7265-mdc 7445-mdc (E&S Af)
 15400-asc 17780-asc
 17830-asc (W & C Africa)
 1906 Mo-Fr: 6155-smg 6195-dha 7265-mdc
 7445-mdc (E&S Africa)
 11810-wof 12095-asc
 (W & C Africa)

Miriam and Youssef

1032 Wed: 6195-sng 9410-sng 11945-sng (E & SE Asia)
 1506 Wed: 7485-sng (Middle East)
 1732 Wed: 7265-mdc 7445-mdc (E&S Af)
 15400-asc 17780-asc
 17830-asc (W & C Africa)
 2106 Wed: 11810-wof 12095-asc (W & C Africa)

Spitfire: The People's Plane

1732 Wed: 7265-mdc 7445-mdc (E&S Af)
 15400-asc 17780-asc 17830-asc
 (W & C Africa)
 0132 Sun: 5970-sla 12095-sng (S Asia)
 0532 Sun: 3955-wof (DRM) (Europe)
 6005-asc 7345-smg 9410-wof
 (W & C Africa)
 9915-mdc 13580-dha (E&S Af)
 2232 Sun: 3915-sng 5890-sng 5955-sla
 6195-sng 7205-sla 7445-pht
 (E & SE Asia)

Outlook (44-minute productions)

1106 Mo-Th: 6195-sng 9410-sng 11945-sng
 (E & SE Asia)
 1706 Mo-Th: 6195-sla 7485-sng
 (M.East)
 0306 Tu - Fr: 9440-sla 12095-sla
 (M.East)

Outlook (27-minute productions)

2132 Sat: 11810-wof 12095-asc
 (W & C Africa)
 0032 Mon: 5945-erv 5970-sla (S Asia)

Witness History

0750 Mo-Fr: 9410-sla 13580-mdc
 15400-asc (E & S Africa)
 7345-sao 9410-sao 9915-asc
 15490-smg (W & C Af)
 1150 Mo-Fr: 6195-sng 9410-sng 11945-sng
 (E & SE Asia)
 1750 Mo-Fr: 6195-sla 7485-sng (M.East)
 0350 Tu-Sa: 9440-sla 12095-sla (M.East)

That's all for this month. As always: your comments and observations are very welcome. Until next time, stay safe and good
 DX & SWL – Alan 

Please remember to direct all communications about subscriptions, bulletin delivery issues, the use of PayPal as a payment method, etc. to Rich Cuff at the club's new business address P. O. Box 3292, Allentown, PA 18106 or to his e-mail address, hq@naswa.net. Thanks! 

International Broadcasting

Dr. Kim Andrew Elliott • 5001 25th St. North • Arlington, VA 22207 • kimelli@verizon.net
<http://www.kimandrewelliott.com>

Michael Pack's journey to become (or not) CEO of USAGM

On May 21, the day after the deadline for this column, the Senate Foreign Relations Committee is (to you, was) scheduled to consider the nomination of conservative documentarian Michael Pack to be CEO of the US Agency for Global Media (USAGM), formerly Broadcasting Board of Governors (BBG). As you are probably aware, USAGM is the umbrella agency for Voice of America, Radio Free Europe/Radio Liberty, Radio Free Asia, Middle East Broadcasting Networks (the Arabic-language Alhurra and Radio Sawa), and Office of Cuba Broadcasting (Radio and TV Martí). This nomination is very important to US international broadcasting because there is no longer a bipartisan board to protect the independence of the USAGM entities. The politically appointed CEO will henceforth call the shots and set the tone of the entities' journalism.

President Trump is eager for Pack to be approved by the Senate and installed as USAGM's CEO. On May 15, he carried on his war of words against VOA (discussed in last month's column). "Voice of America is run in a terrible manner. They're not the Voice of America. They're the opposite of the Voice of America," he said. As VOA itself reported (bit.ly/3e7DjEn), "He did not elaborate." But his latest insults probably have to do with the fact that the VOA director is Amanda Bennett, a holdover from the Obama Administration. Statutorily, Bennett was actually appointed by the bipartisan BBG while it still had authority to hire, and I doubt President Obama was much concerned about who became VOA director. In any case,

Pack, if and when he becomes USAGM director, will usher Bennett out of the Cohen Building with dizzying speed, replacing her with someone of his liking and/or of Trump's liking.

In fact, that and/or is the issue. In a job at the top of multiple news organizations, thus requiring independence, *will* Pack be independent? Democrats and detractors doubt it, given his credentials as associate of Steve Bannon and senior fellow of the conservative Claremont Institute. A litmus test of Pack's worthiness to lead USAGM was his documentary about Justice Clarence Thomas, which aired on PBS May 18. (I missed it.) Baltimore Sun TV critic David Zurawik mostly panned it. "Integrity is not a word I would use in connection with this film. I think some of its messages are not just one-sided; they are dangerous in the way they add to the deep political divide plaguing this nation." (bit.ly/36iBXE5) Pack explained, "This film shows you how Clarence Thomas sees the world and how he sees his life. It doesn't promise to be the objective truth on anything." (bit.ly/2ZoyToC)

Will Pack say no?

Perhaps Pack will agree with the critics (mostly Republic and conservative) of US international broadcasting who believe that it shouldn't "promise to be the objective truth on anything." It should promote the United States and its policies, and lambaste America's enemies. On the other hand, he

told a Senate panel that he would be able to set his personal views aside to honor the traditional independence of the agency's journalists. "Their [VOA's] independence is the bedrock of the institution," he said. "I guess it comes down to the need to say no when you get a call from somebody, a political person, telling a journalist what to do." ([wapo.st/2TpY4mX](https://www.wapo.st/2TpY4mX))

So which way will he go? During my 32 years at VOA, I saw diplomats and PR flacks and political appointees hired as senior managers. They looked around and noticed they are in a news organization. Accordingly, they "go native," and protect the autonomy of VOA's newsroom even though they had no background as journalists. Maybe this has to do with the Washingtonian tendency to protect bureaucratic turf. On the other hand, officials with similar backgrounds have been appointed to VOA management and have proceeded to steer content to toe the Administration line. It was such pendulum swings between independent and directed journalism that hurt VOA's long term credibility, leading to the creation of the Broadcasting Board of Governors to give that independence permanent protection. Well, permanent turned out to be from 1994 to sometime in 2020, when, because of legislation in 2016, the political USAGM CEO takes over.

Michael Pack's nomination has been held up by Democrats because of an investigation of whether funds (over \$1.6 million) have been funneled from his nonprofit Public Media Lab to his for-profit production company Manifold Productions. In fact, the District of Columbia Attorney General is now investigating this matter. (cnb.cx/2Tl4rb1)

If shenanigans on the part of Michael Pack are established, will any such schemes continue within USAGM if and when Pack

becomes USAGM CEO? The plot thickened a bit late Friday, May 15, when Trump dismissed the State Department Inspector General Steve Linick, replacing him with Stephen Akard, an ally of Vice President Pence, as acting IG. The State Department IG also has responsibility for USAGM. So, if the Senate confirms Pack despite accusations of creative bookkeeping, and if any such dubious arrangements carry forth into Pack's tenure at USAGM, will Akard's stint as State/USAGM IG be characterized by a propensity to look the other way?

My prediction: GAIN. And AGAIN. (And profits.)

Here is my prediction. You read it first (and likely for the only time) here. It starts with Trump's recent displeasure with Fox News, and specifically Neil Cavuto's warning to his viewers not to follow the President's example by taking hydroxychloroquine. Trump tweeted that Fox News "is no longer the same" and said he was "Looking for a new outlet!" (bit.ly/3gaaGIw)

Pack will be confirmed as CEO of USAGM. He will create a new – yet another – USAGM entity. It will be a 24-hour English-language international news channel to compete with CNN International, which has been a past target of Trump's vitriol. Its name will be something like Great America International News (GAIN).

Except, for an international news channel, GAIN will broadcast a great deal of US news. Or something sort of like news. And many of its hours will be devoted to talking heads. This is, after all, cheaper than hard news. And these commentators will be more suited than reporters to extol the virtues of Administration policies and of President Trump himself, and to heap scorn on Administration antagonists, international and domestic. Especially domestic.

Meanwhile, a Trump confederate (who might also be a Confederate) will form a corporation. It might be called (somewhat awkwardly) America's Great America International News (AGAIN). This corporation will have a simple business plan: It will simply take advantage of the public domain nature of GAIN and broadcast it 24-hours via cable systems, DTH satellites and IPTVs *within* the United States. Any objections based on domestic dissemination prohibitions will be laughed off with the explanation (true? false? who cares anymore?) that USAGM did not encourage or market such a relay within the United States. AGAIN will insert commercials in time slots conveniently provided by GAIN for the adverts of its international affiliates, and make lots of money given that it has acquired all its content at no cost whatsoever.

GAIN's international audiences (which won't be especially large) may be perplexed by its frequent discussions of Hillary's emails, Benghazi, Vince Foster, James Comey, Christopher Wray, Susan Rice, the unmasking of Michael Flynn, Obamagate, and (of particular interest to African viewers) the conclusion that Barack Obama was "grossly incompetent."

In Trump's second term, there may be suspicions that GAIN is really a just pretense for AGAIN serving as Trump's "new outlet," with the profits going Lord knows where. The State/USAGM IG will, in the new order of things, look the other way. Besides, he'll be too busy walking the Pompeos' dogs and picking up their dry cleaning.

See Kim's projects: <https://twitter.com/kaedotcom> and <http://swradiogram.net>

Shortwave Center

John Figliozi • 45 Algonquin Rd • Clifton Park, NY 12065 • jfiglio1@nycap.rr.com

How are we all doing with this virus thing? Sticking close to those radios, I hope! No virus there! Well, here's some reading for you. First, it's good to see that someone is improving and still manufacturing shortwave transmitters.

Then, we go to the deep historical roots of radio followed by a surge to shortwave's burgeoning digital future. The twenty teens may just finally be DRM's era. Good reading! Good listening! Good DXing!

SHORTWAVE TECHNOLOGY

Ampegon Puts Focus on Shortwave Transmitters

Highlights progress on the company's third-generation solid-state shortwave transmitters

Radio World Magazine

May 11, 2020

Ampegon Power Electronics highlights progress on the company's third-generation

solid-state shortwave transmitters, which it says will offer "significant advances in efficiency."

The company says this work will pave the way toward higher-power broadcast outputs and meet current expectations of a shortwave equivalent to medium-wave and FM transmitters. "Combined, these two developments will bring FM-quality



broadcasts with all the benefits of shortwave,” said Simon Keens, Ampegon sales and business development manager. Ampegon has also developed a retrofit upgrade to current UCS generation control

systems for previous generation 100 kW, 250 kW, 300 kW and 500 kW transmitter systems.

“Given that the lifetime of Ampegon transmitters is measured in decades, many systems currently in operation — previous ECAM and ECOS-II generation transmitters supplied under the names Thales or Thomson (Ampegon’s previous names) — either do not have DRM-ready control systems, or have a need for now-obsolete spares,” said Keens.

The upgrade promises to bring touchscreen technology, efficient PSM operations and “quick and precise” retuning with digital motor control to existing transmitters.

SHORTWAVE HISTORY

They Set the Stage for the Birth of Radio

A look at the technology innovations that helped to launch radio broadcasting

By James E. O’Neal, Radio World Magazine

May 15, 2020

Later this year we celebrate the 100th anniversary of radio broadcasting as we know it, which came into being with the transmission of U.S. presidential election returns in the fall of 1920 by station KDKA.

There are a number of documented attempts at broadcasting to the general public prior to this date; none of these other pioneering operations really caught on and captivated much attention, save for the amateur radio audience, which likely viewed them as just an experimental curiosity having some entertainment value.

Obviously, the KDKA project didn’t just happen. Its progenitor Frank Conrad didn’t stop by the stockroom of his employer Westinghouse Electric and requisition a pile of parts that, on a whim, he turned into a radiotelephone transmitter.

A lot more had to happen prior, and that is what this article is all about. It will also serve as a reference to articles you’ve been reading by John Schneider that are part of this “Radio at 100” series and are focusing on specific topics in more depth.

Roots of Radio

Most historians credit Guglielmo Giovanni Maria Marconi — inspired by reading about Heinrich Hertz and his work in demonstrating the existence of electromagnetic radiation — with having “invented” radio around 1895.

Truth be known, young Signor Marconi, barely 21, didn't really invent anything new. He combined the inventions of several others (spark coil, detector, batteries, etc.) to create a wireless signaling system. As he was the first to do this and promote his accomplishment (through his English mother's connections), he got credit — and a share in the 1909 Nobel prize in physics — for putting together this rudimentary communications system. Later, claims to priority were made by or on behalf of others including Tesla, Popov, Lodge and Bose. But they were less well connected and without the support and machinations of a doting mother.

None of these individuals invented broadcasting. Their concerns centered around investigations of electromagnetic radiation, detecting lightning discharges, remotely igniting gunpowder, wireless transmission of electrical power, or in the case of Marconi creating a means of wireless signaling and communication.

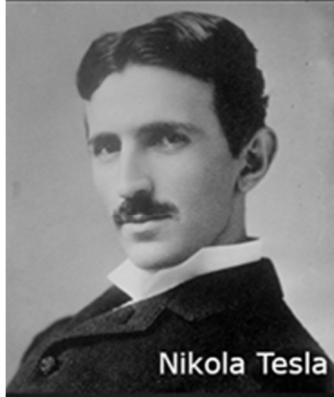
Broadcasting of speech and music to the masses wirelessly would be the provenance of others and would have to wait a decade or so.

False Starts

Most notable of these was Reginald Aubrey Fessenden who, early in the 20th century, was driven by an obsession of sorts to move radio away from the endless streams of "dits and dahs" being spewed out by gigantic high-voltage spark coils — really artificial



Guglielmo Marconi



Nikola Tesla



Raymond Heising

lightning machines — and used more or less exclusively for communication between ships and corresponding land-based stations. (By that time, there was also a sizable community of amateurs of all ages who were interested in provoking the "luminiferous Ether" through which these "Hertzian waves" were thought to travel.)

Fessenden was the first to realize the requirement for a smoothly changing (sinusoidal) carrier wave upon which to impress speech and music, and also the potential for wirelessly transmitting such intelligence to the masses untrained in the art of copying Morse Code.

He succeeded well enough in his efforts in late 1906 to demonstrate "radiotelephony" to a handful of witnesses, including a couple of Associated Press reporters, late in the afternoon of Friday, Dec. 21, that year. (Fessenden would much later in his life claim to have put together a real "broadcast" a couple of days later to entertain shipboard and

land station wireless operators, but this wonderful Christmas Eve event has never been substantiated.)

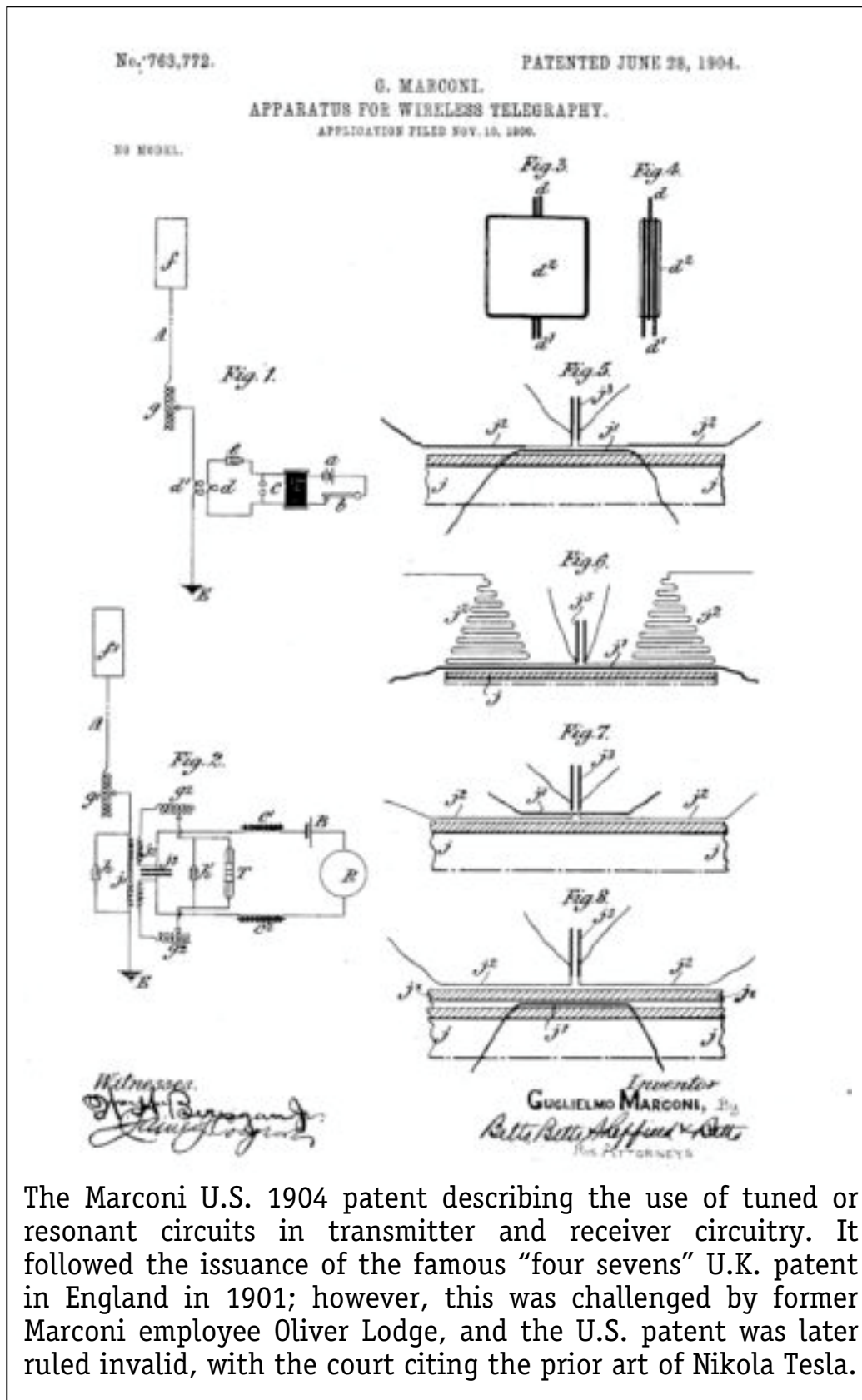
While Fessenden certainly had the dream — even providing a typed "handout" about the potential to transmit news and entertainment to large numbers of "listeners-in" to attendees at his Dec. 21 demonstration — he lacked the drive to follow through on this initiative, leaving it to others.

One of these, Lee de Forest — who invented speech and music on the air in and around

New York City in late December 1906, and carrying this work on into 1907 and beyond. De Forest even broadcast music created by a primitive keyboard synthesizer, the Telharmonium, and live performances from the stage of the New York Metropolitan Opera House.

In San Jose, Calif., and a bit later out of the gate, Charles "Doc" Herrold was smitten by the concept of providing entertainment wirelessly to the masses, first experimenting around 1909 with a system of wireless telephony similar to that used by de Forest and starting up a regular broadcasting initiative in 1912.

However, in both cases (and on both coasts), outside of the amateur radio community and a few members of the professional ship-to-shore users of radio, there wasn't really much of a listening audience, and apparently neither de Forest nor Herrold was sufficiently interested in promoting their broadcasting



the first really useful electronic amplifying device and would later assume the title of "father of radio" — did follow through a few days after Fessenden's demo by putting

efforts to achieve “buy-in” from the general public.

They preferred instead to focus on the creation of radio-related inventions and patents and, in the case of Herrold, operating a school to train prospective “radiomen” in the fundamentals of the art.

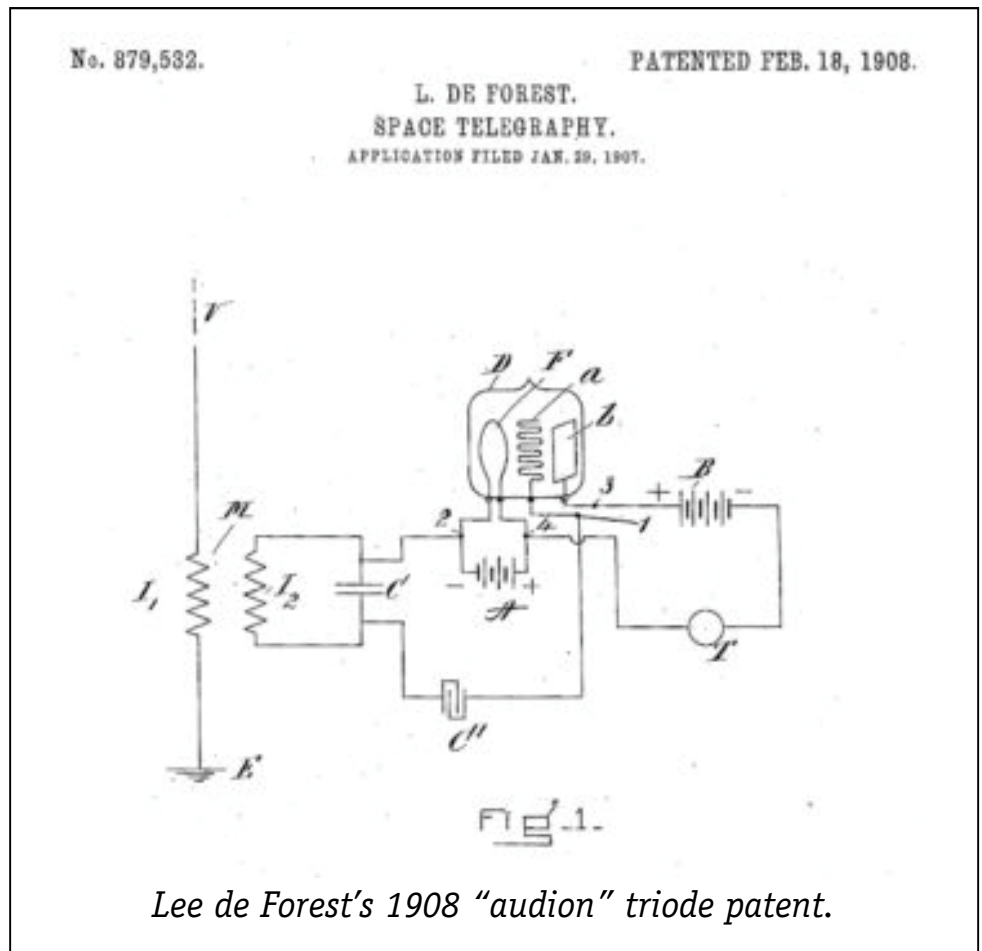
Truth be told, due to the rather poor audio fidelity that was achievable via the transmission and modulation technology used by de Forest and Herrold — they both employed transmitters driven by a hissing electric arc — it is doubtful that even with a lot of money spent on promotion, the masses would have been attracted much beyond the initial novelty of the thing.

Inventing the Technology

So, assuming that Westinghouse’s Dr. Frank Conrad did possess the requisite technical savvy and imagination to envision and bring into being radio broadcasting, it’s obvious that several things had to happen to move from the high-frequency alternator of Fessenden and the “arcphone” technology employed by de Forest and Herrold.

There was no quantum leap here. A number of principles had to be established, discoveries made and inventions perfected before a satisfactory means for transmitting speech and music burst upon the global scene in the early 1920s.

Foremost was the setting down of the fundamental equations and relationships



Lee de Forest's 1908 “audion” triode patent.

governing all electromagnetic radiation by James Clerk Maxwell, and the experimentation and proof positive of the existence of this invisible energy a few years later by Hertz.

Both of these milestone events were necessary for radio of any sort to move forward; however, in themselves, they did not lead directly to a system for broadcasting.

One of the seminal inventions, or principles, was that of resonant, or tuned, circuits. For this, the Marconi company has to be given some amount of credit, as a rather famous British patent (No. 7,777 and referred to as “the four sevens”) was awarded to that firm in 1901.

This patent (“Improvements in Apparatus for Wireless Telegraphy”) and its U.S. counterpart no. 763,772, issued in 1904,

describe the use of tuned circuitry and the transmitter and receiver to allow them to "syntonize" or operate on the same frequency.

Regardless of who invented tuned circuitry achieved through use of discrete components, it was a fundamental step on the path to broadcasting.



Charles "Doc" Herrold (standing, center) at his San Jose, Calif., combination radio school and broadcast station. The turntable (phonograph) and microphone (telephone carbon "transmitter") are clearly visible on the table at the left.

This invention was driven by the need to reduce interference between spark radiotelegraph stations, which, prior to the introduction of such technology, radiated very broad signals (spread-spectrum?) with tuning set only by whatever stray capacitance to ground and antenna/transmission line inductance existed at a particular installation.

(Interestingly, Oliver Lodge, who had been employed by Marconi and experimented along these lines, challenged Marconi's priority in making such a discovery. Also, the U.S. version of the patent was declared invalid in 1943, with credit being given to Tesla for prior art.)

Another key component was something that Marconi and his company couldn't provide: a means for generation of a continuous high-frequency oscillation to serve as a "carrier wave" for transmission of speech and music. (Marconi's spark-driven wireless telegraphy operated in bursts of electromagnetic energy, referred to as a "damped wave" or an oscillation that trailed off in intensity over time.)

Fessenden appears to have been first to recognize the unsuitability of damped waves for transmission of speech and music,

initially working to perfect a spark transmitter with an extremely fast "make-and-break" interval so as to try and ameliorate this shortcoming. He did build a working model and demonstrated it in late 1900, transmitting a raspy, but intelligible, representation of human speech for a distance of about a mile.

Fessenden quickly realized that spark was a dead-end technology for his application and experimented for a while with Poulsen's arc-driven oscillator before moving on the concept of using a high-frequency AC generator (alternator) to create a continuous wave without the "sizzle" associated with arc.

After several years, and a lot of pressure exerted on the General Electric Co. to develop a high-frequency alternator, he did publicly demonstrate successful transmission of speech and recorded music on the afternoon of Dec. 21, 1906.

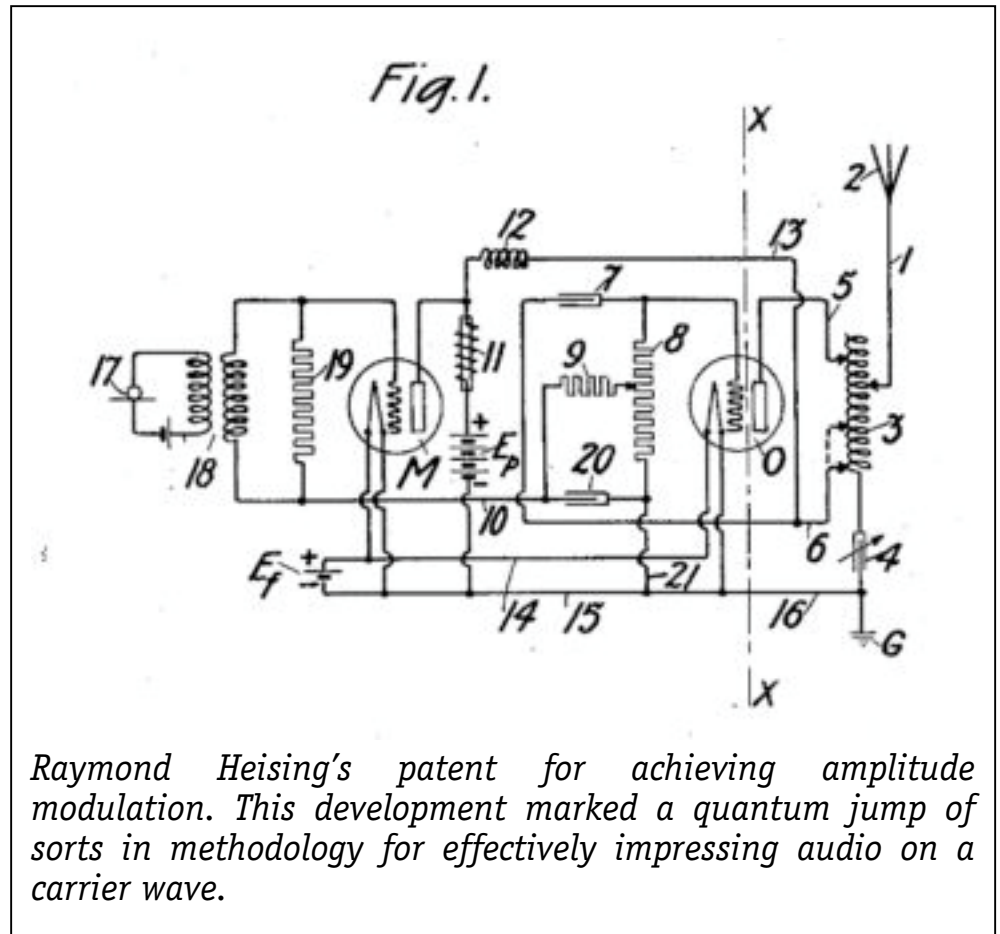
However, there is a limit as to how fast an alternator's armature can spin without flying apart. This limited operation of such mechanical sources of RF to very long wavelengths that aren't really practical for general broadcasting purposes (VLF and LF portions of the spectrum).

Audio modulation is also very difficult to achieve with such rotating machine technology. (Fessenden simply inserted a specially designed carbon microphone in series with the transmission line feeding the antenna. The mic's resistance varied with the audio reaching it, and this in turn varied the transmission line current, achieving amplitude modulation of a sort. He admitted at his Dec. 21 demo that this scheme provided a modulation depth of no more than about 5%.)

Despite this rather large advance in technology, practical broadcasting had hit another dead end of sorts, awaiting a more practical means for generation of a continuous wave.

This came almost by accident in late 1906, about the time that Fessenden was performing his public demo of speech and music, when de Forest hit upon the idea of

an electronic amplifying device when trying to develop a detector that didn't infringe on previous inventions. It was not long before de Forest and others discovered that his crude three-element vacuum tube could also function as an oscillator. This device, after a lot of refinement by licensees GE and AT&T, supplied another key ingredient essential for



the birth of broadcasting.

Aside from a practical radio detector — which now existed in several forms (electrolytic, crystal and vacuum tube) — the only other missing ingredient was a reasonably efficient methodology for modulating audio onto a carrier wave. This was supplied by a Western Electric engineer, Raymond A Heising, in the form of his "constant current modulation technique."

While not perfect in terms of efficiency or modulation depth, it did provide a relatively simple way to impress audio intelligence

onto a carrier, and was a quantum leap from the methodology employed by Fessenden and others in broadcasting's "pre-history."

While these elements — tuned circuitry, a practical source of continuous waves and an audio modulating scheme with reasonable efficiency — which were all available by the mid- or late-1910s, the world would still have to wait a little longer for the birth of broadcasting.

A major complicating factor had arisen: The Great War (1914–1918). With America's entry

into the fighting in the spring of 1917, much of the work on radio research and development was halted, and an executive order in April from Pres. Woodrow Wilson led to the dismantling of private transmitting and receiving equipment.

Radio went to war for the first time, and research in this area was basically limited to the production of practical apparatus for use in battlefield communication.

Broadcasting would have to wait a little longer.

SHORTWAVE DIGITAL

Global DRM A20 Transmissions Schedule

Frequency	Broadcaster	Languages(s)	Transmission Stop and Start in UTC	Period of operation Transmit.power and Location Azimuth CIRAF zones coverage Notes
3955kHz	BBC Worldservice	English	04:59-06:00	100kW Woofferton Azimuth 114°; 27SE,28NW DRM_EUROPE
3965kHz	Radio France Internationale	French	01:00-00:57	1kW Issoudun Azimuth 0°; 27 drm
5910kHz	Radio Romania International	Italian	18:00-18:30	30kW Tiganesti Azimuth 270°; 28SW
5960kHz	Radio Russia	Russian	16:00-20:00	15kW Kaliningrad Azimuth 220°; 27,28
5975kHz	Radio New Zealand	English	16:45-19:00	123457 only (SUN=1) 35kW Rangitaiki Azimuth 35°; 61S,62,63W NZL NZL
6030kHz	China National Radio	Chinese	20:25-18:05	30kW Beijing Azimuth 0°; 43NE,44NW
6090kHz	Radio Romania International	German	18:00-19:00	90kW Tiganesti Azimuth 307°; 28NW

Frequency	Broadcaster	Languages(s)	Transmission Stop and Start in UTC	Period of operation Transmit.power and Location Azimuth CIRAF zones coverage Notes
6100kHz	All India Radio	Hindi	08:45-12:00	250kW Delhi Azimuth 312°; 41N
6115kHz	Radio New Zealand	English	16:45-19:00	123457 only (SUN=1) 35kW Rangitaiki Azimuth 35°; 61S,62,63W NZL NZL
6120kHz	Radio Russia	Russian	15:00-19:00	40kW Moskva Azimuth 261°; 28
6175kHz	Radio France Internationale	French	09:00-12:00	100kW Issoudun Azimuth 153°; 27SE,28SW,37NE DRM_Test-Special
6175kHz	Radio France Internationale	French	09:00-12:00	100kW Issoudun Azimuth 267°; 27SW,37NW DRM_Test-Special
6175kHz	Radio France Internationale	Multiple languages	12:00-15:00	150kW Issoudun Azimuth 0°; 27,37NW DRM_Test-Special
7285kHz	Radio New Zealand	English	16:45-18:45	123457 only (SUN=1) 35kW Rangitaiki Azimuth 35°; 61S,62,63W Altern NZL
7305kHz	Radio Romania International	Russian	04:30-05:00	90kW Tiganesti Azimuth 37°; 29
7315kHz	World International Broadcasters, Inc.	English	07:00-08:30	23456 only (SUN=1) 50kW Red Lion, PA Azimuth 62°; 27,37,38
7315kHz	Radio Romania International	French	20:00-20:30	90kW Galbeni Azimuth 285°; 27SE
7315kHz	Radio Romania International	English	20:30-21:00	90kW Galbeni Azimuth 300°; 27N

Frequency	Broadcaster	Languages(s)	Transmission Stop and Start in UTC	Period of operation Transmit.power and Location Azimuth CIRAF zones coverage Notes
7325kHz	Radio Romania International	French	05:00-05:30	90kW Galbeni Azimuth 285°; 27SE
7325kHz	Radio Romania International	English	05:30-06:00	90kW Tiganesti Azimuth 307°; 27N
7325kHz	Radio Romania International	German	06:00-06:30	90kW Tiganesti Azimuth 307°; 28NW
7330kHz	Radio New Zealand	English	16:45-18:45	35kW Rangitaiki Azimuth 35°; 61S,62,63W NZL NZL
7500kHz	Trans World Radio	Japanese	12:45-13:15	1 only (SUN=1) 3 May - 24 Oct 90kW Agana, Guam Azimuth 320°; 45
9410kHz	Radio Russia	Russian	13:00-15:00	15kW Irkutsk Azimuth 224°; 41
9580kHz	Radio Romania International	Russian	15:00-15:30	90kW Tiganesti Azimuth 37°; 29
9610kHz	Radio Romania International	Spanish	21:00-22:00	90kW Tiganesti Azimuth 247°; 14
9625kHz	Radio Russia	Russian	07:00-14:00	15kW Kaliningrad Azimuth 220°; 27,28
9655kHz	China National Radio	Chinese	08:00-12:00	30kW Urumqi Azimuth 98°; 43NE,44NW
9655kHz	China National Radio	Chinese	22:00-01:00	30kW Urumqi Azimuth 98°; 43NE,44NW
9740kHz	Radio Romania International	English	03:00-04:00	90kW Galbeni Azimuth 100°; 41
9760kHz	Radio New Zealand	English	17:45-20:00	35kW Rangitaiki Azimuth 35°; 61S,62,63W NZL NZL
9760kHz	Radio Romania International	English	17:00-18:00	90kW Tiganesti Azimuth 307°; 27N

Frequency	Broadcaster	Languages(s)	Transmission Stop and Start in UTC	Period of operation Transmit.power and Location Azimuth CIRAF zones coverage Notes
9850kHz	Radio Russia	Russian	08:00-15:00	15kW Kaliningrad Azimuth 220°; 27,28
9850kHz	Voice of Russia	Russian	20:00-23:00	20kW Komsomolsk Amur Azimuth 34°; 26
9870kHz	China National Radio	Chinese	10:00-12:00	30kW Qiqihar Azimuth 203°; 44W
9870kHz	Radio Russia	Russian	04:00-07:00	15kW Kaliningrad Azimuth 220°; 27,28
9895kHz	Radio Russia	Russian	18:00-21:00	15kW Irkutsk Azimuth 224°; 41
9910kHz	Trans World Radio	Mandarin Chinese	11:00-11:30	7 only (SUN=1) 23 May - 25 Oct 90kW Agana, Guam Azimuth 305°; 42,43,44
9950kHz	All India Radio	Urdu	08:15-12:00	100kW Delhi Azimuth 342°; 27,28
9950kHz	All India Radio	Multiple languages	12:00-13:15	100kW Delhi Azimuth 132°; 27,28
9980kHz	World International Broadcasters, Inc.	English	07:00-10:00	17 only (SUN=1) 50kW Red Lion, PA Azimuth 62°; 27,37,38
9980kHz	World International Broadcasters, Inc.	English	08:30-11:00	23456 only (SUN=1) 50kW Red Lion, PA Azimuth 62°; 27,37,38
11690kHz	Radio New Zealand	English	19:45-22:00	35kW Rangitaiki Azimuth 35°; 61S,62,63W NZL NZL
11695kHz	China National Radio	Chinese	01:00-09:00	30kW Dongfang Azimuth 41°; 44S
11760kHz	Radio Russia	Russian	20:00-22:00	40kW Moskva Azimuth 261°; 37NW,27,28

Frequency	Broadcaster	Languages(s)	Transmission Stop and Start in UTC	Period of operation Transmit.power and Location Azimuth CIRAF zones coverage Notes
11865kHz	Radio Russia	Russian	16:00-19:00	40kW Moskva Azimuth 261°; 28NW
11995kHz		English	05:00-08:00	250kW KABD Azimuth 100°; 41
12025kHz	China National Radio	Chinese	01:00-10:00	14 May - 25 Oct 30kW Qiqihar Azimuth 225°; 43NE,44NW
12025kHz	Radio Russia	Russian	06:00-10:00	40kW Moskva Azimuth 261°; 27,28
13600kHz	Voice of Russia	Russian	23:00-04:00	20kW Komsomolsk Amur Azimuth 34°; 26
13650kHz	Radio Russia	Russian	10:00-12:00	15kW Irkutsk Azimuth 224°; 41
13710kHz	Radio Romania International	Arabic	17:00-20:00	250kW KABD Azimuth 350°; 6-8
13800kHz	Radio Russia	Chinese	04:00-04:30	90kW Tiganesti Azimuth 67°; 43,44
13810kHz	China National Radio	Russian	06:00-09:00	40kW Moskva Azimuth 261°; 27,28
13825kHz	China National Radio	Chinese	04:00-11:00	30kW Kunming Azimuth 32°; 43NE,44NW
15110kHz		Arabic	01:00-09:00	30kW Beijing Azimuth 175°; 44S
15180kHz	China National Radio	Chinese	09:45-13:25	250kW KABD Azimuth 310°; 27,28
15200kHz	Trans World Radio	English	01:00-04:00	30kW Kunming Azimuth 32°; 43NE,44NW
15540kHz		Urdu	10:26-10:56	250kW KABD Azimuth 100°; 41
15540kHz		English	18:00-21:00	250kW KABD Azimuth 310°; 27,28

Frequency	Broadcaster	Languages(s)	Transmission Stop and Start in UTC	Period of operation Transmit.power and Location Azimuth CIRAF zones coverage Notes
15620kHz	BBC Worldservice	English	07:59-09:00	100kW Kranji (Merlin) Azimuth 315°; 41 DRM_ASIA
15735kHz	Voice of Russia	Russian	04:00-10:00	20kW Komsomolsk Amur Azimuth 34°; 26
15750kHz	World International Broadcasters, Inc.	English	11:00-17:00	23456 only (SUN=1) 50kW Red Lion, PA Azimuth 62°; 27,37,38
17770kHz		German	00:00-24:00	1kW Erlangen Azimuth 0°; 18,19,27,28,29,37N TENT.
17830kHz	China National Radio	Chinese	01:00-09:00	30kW Dongfang Azimuth 16°; 43NE,44NW

Listener's Notebook

Richard A. D'Angelo • 2216 Burkey Drive • Wyomissing, PA 19610 • rdangelo3@aol.com

Times are UTC and frequencies in kHz.

ALASKA Frequency change of WCB KNLS The New Life Station via tx#1:

1100-1200 NF 9735 NLS Chinese, ex 9740 (DX Mix-Bulgaria)

7355, KNLS, Anchor Point, at 1200 with IS, English s/on announcements at 1201:30. Very poor but improved to poor-fair later, May 4. (Harold Sellers-BC/DXplorer)

ANTARCTICA LRA 36 Radio Nacional Arcángel San Gabriel Base Esperanza will be on air:

1400-1600 on 15476vSGB 010 kW Spanish CUSB EVERY WEDNESDAY (DX Mix-Bulgaria)

15476, LRA 36, Radio Nacional Arcángel San Gabriel, Base Esperanza, e-QSL received in 23 days for report sent to: tranalra36@radionacional.gov.ar. (Manuel Méndez-Spain/British DX Club)

ARMENIA Very good signal of TWR India in English via CJSC Yerevan May 19:

1420-1424 on 11590 Mon-Fri, good; 1415-1445 Sat/Sun. From the beginning of Summer A-20 no time and frequency announcement in English! (DX Mix-Bulgaria)

Iran International TV on 11570 & 11550, May 16:

0400-1200 on 11570 ERV Persian, fair/good
1200-1315 on 11550 ERV Persian, fair/good

1315-1400 on 11550 ERV Persian, under AIR(DX Mix-Bulgaria)

AUSTRIA Very good signal of Oesterreichischer Rundfunk-1 ORF-1 in 49mb May 13:

0500-0620 on 6155 MOS German Mon-Fri;
0500-0610 Sat/Sun (DX Mix-Bulgaria)

Good signal of NHK World Japan Network Radio Japan in English, May 19

0430-0500 on 5975 MOS English Mon-Fri;
0500-0530 Sat/Sun (DX Mix-Bulgaria)

Adventist World Radio via MBR Moosbrunn, May 20

0500-0530 on 9630 Hausa, good (DX Mix-Bulgaria)

Adventist World Radio via MBR Moosbrunn on May 14:

0400-0430 on 6120 Turkish, very good (DX Mix-Bulgaria)

BANGLADESH 4750, Bangladesh Betar - Home Service, from 1240 to 1243, on May 21, call-to-prayer for the Maghrib prayer, which was just after their local sunset; unusual anomaly here, as there was no audio QRM from either CNR1 nor VOI; which is rare! Still running their Home Service during Ramadan. Will they change back to External Service once that ends? Cyclone Amphan has mostly hit the coastal areas of Bangladesh, so happy to find BB still on the air. (Ron Howard-CA)

BRAZIL 4774.8, May 2, 2002, Radio Congonhas is on air via SDR remote receiver in Sao Paulo. (Méndez-Spain/Shortwave Bulletin) 4775, 0920, Radio Sora de Congonhas (tent) poor/noisy, carrier visible, frequency offset is right, the only station scheduled on 4775. Limited audio heard 8/4. (Stu Forsyth-New Zealand/New Zealand DX Times)

BULGARIA The B20 HFCC/ASBU Coordination Conference is scheduled for

Sofia on 24-28 August 2020. Due to the ongoing Coronavirus (COVID-19) situation it is recommended that members should NOT make any travel bookings for the B20 conference at this time. This includes flight, hotel bookings and making any arrangements for visas. The HFCC Steering Board is monitoring the situation closely, will make a final decision at our June 10th meeting regarding whether, or not to proceed with the conference. We will contact members shortly before the June 10 meeting to check your status and to ask your opinion about attending the conference in Sofia. Meantime, online registration for the B20 conference remains open. (Jeff White, WRMI and HFCC Chairman/DX Mix-Bulgaria)

Reception of FPU Radio Dabanga via SPL Secretbrod May 13:

1529-1627 on 11640 Darfur Arabic, good signal (DX Mix-Bulgaria)

Updated summer A-20 schedule of NEXUS IRRS Shortwave Radio Warra Wangeelaa-ti: 1500-1530 on 15515 SCB Afan Oromo Sat (DX Mix-Bulgaria)

CANADA 6030, CFVP, Calgary received from station engineer: "last week, the ground at the base of the shortwave tower was under water. Not sure what it is like now. We have to replace a couple grounding rods and ground wire. As soon as we can do that we should have it back on the air." 6 May 2020. (Harold Sellers-BC/DXplorer)

CHILE 5825, Radio Triunfal Evangelica attractive E-QSL with date/frequency and my name showing a Tower on a Blue Background/Globe, with accompanying E-letter in Spanish, in 10 days. The reply came from radiotriunfalevangolica@gmail.com. V/s: Fernando Gonzalex Segura. (Edward Kusalik-AB/DX Fanzine)

CHINA Changes of China National Radio-1 in DRM mode from May 14:

0100-0400 NF 11995 QIQ Chinese, ex 9420.
0400-1000 on 11995 QIQ Chinese, add. Freq
(DX Mix-Bulgaria)

CLANDESTINE Radio Ndarason International
via ENC-DMS Woofferton, May 18:

0600-0700 on 12050 Kanuri-good signal incl.
0615-0625 on 12050 news bulletin in French
0700-0800 on 12050 ASC Kanuri, weak/fair
signal 1800-1900 on 9775 WOF Kanuri -
fair/good signal,
1900-2100 on 12050 WOF Kanuri* very good
BUT from
1915-1925 on 12050 WOF without French nx
bulletin (DX Mix-Bulgaria)

Reception of Voice of Oromo Liberation via
MBR Nauen on May 20:

1700-1730 on 15420 Afan Oromo Fri/Sun,
good signal
1700-1800 on 15420 Afan Oromo Wed, good
signal (DX Mix-Bulgaria)

Poor signal of MGB Eye Radio via TDF
Issoudun, May 20:

1600-1700 on 15410 Juba Arabic* Mon-Fri.
* including other langs
English/Dinka/Nuer/Shilluk/Bari/Zande/Lu
toho (DX Mix-Bulgaria)

Fair to good signal of MGB Eye Radio in 41mb
on May 15:

0400-0500 on 7340 SMG Juba Arabic Mon-Fri
(DX Mix-Bulgaria)

Reception of Republic of Yemen Radio in
25mb May 5:

from 1400 on 11860 JED or RIY Arabic, fair
signal (DX Mix-Bulgaria)

Free North Korea Radio via RRTM Telecom
Tashkent on May 12:

1300-1400 on 11510 TAC Korean, weak to
fair signal (DX Mix-Bulgaria)

Dandal Kura Radio International via MBR
Nauen on May 19:

0700-0800 on 13590 Kanuri Daily, good and

0800-0900 on 13590 Kanuri Sat, also good
1800-1900 on 11830 Kanuri, fair to good
signal (DX Mix-Bulgaria)

Manara Radio International via TDF
Issoudun, May 19:

0700-0800 on 13840 Hausa, weak to fair
1600-1700 on 15285 Hausa, good signal (DX
Mix-Bulgaria)

Reception of BRB Denge Welat via Issoudun,
May 15:

0230-0500 on 9525 Kurdish, very good
0500-0600 on 11530 ISS Kurdish, very good
(DX Mix-Bulgaria)

BRB Denge Welat via MDA Grigoriopol & TDF
Issoudun May 4:

0600-1600 on 11530 KCH Kurdish, weak
1600-2100 on 11530 ISS Kurdish, very good
signal (DX Mix-Bulgaria)

CONGO REP. 6115, R. Congo, 0543-0553. A
rare event here, with well above average
reception; announcers and nice African
music/singing; somewhat early for any
Japanese QRM here, which started to be
slightly noticed about 0550; QRN (static). An
exceptional day! (Ron Howard-CA)

CUBA Summer A-20 frequency changes of
Radio Habana Cuba RHC vs A-19:

1100-1500 NF 7350 BEJ Spanish, ex 9640 A-
19

2200-2230 NF 11880 BAU French, ex 7380 A-
19

2230-2300 NF 11880 BAU Portug., ex 7380 A-
19

2300-2400 NF 11880 BAU English, ex 7380 A-
19

0100-0700 NF 6145 BAU English, ex 6165 A-
19 (DX Mix-Bulgaria)

DENMARK 5825, Radio OZ-Viola, eQSL in 1
day, v/s Jan Steen, e-mail address:
jansteendk@hotmail.com. NB: Heard in
Europe. (Vashek Korinek-South Africa/DX
Fanzine)

Radio208 plans to be on 5805 (200 watts) from Hvidovre in late April/early May. Reception reports are acknowledged by an eQSL for reports sent to wmr@wmr.dk - or by a QSL card (as well as stickers and as long as stocks last: a pennant) for reports sent to World Music Radio, PO Box 112, DK-8960 Randers SØ, Denmark (enclose return postage - 2 IRCs, 5 euro or equivalent. Sorry but 1 or 2 USD won't do). Please note that reports using remote receivers are not QSLed. (Stig Hartvig Nielsen WMR/Radio208/British DX Club)

After four unsuccessful attempts over the last couple of months today Radio 208 finally began broadcasting on shortwave on 5805 running 24/7. The American built 250 Watts transmitter blew up three times in the process. Then a new British built 250 Watt transmitter was purchased, but it turned out that the maximum power it could radiate was 164 Watt. This transmitter has now successfully been put into operation - running about 75 Watts at present; will be increased to 150 Watts later. The transmitter site is Hvidovre, a suburb of Copenhagen and the aerial is a dipole. This is the first time for more than 30 years that SW broadcasting is being carried out from Copenhagen. Radio Denmark ceased broadcasting in February 1990. (Stig Hartvig Nielsen-Denmark/PlayDX) If everything goes well, WMR will be returning to 5840 with a new and stronger transmitter (500 W) from a new transmitter site near Bramming within the next two weeks. This will be on the air 24/7. (Stig Hartvig Nielsen/British DX Club)

ENGLAND FEBA Radio / Radio Sama via ENC-DMS Woofferton on May 6:
1700-1800 on 15260 Arabic, fair signal (DX Mix-Bulgaria)

Radio Akhbar Mufriha via ENC-DMS Woofferton, May 17:

2100-2115 on 7300 Tachelhit, good (DX Mix-Bulgaria)

EQUATORIAL GUINEA 5005, Radio Nacional, Bata, on air at 0515 on May 7 extremely weak, only carrier detected here in Lugo. (Manuel Mendez-Spain, hcdx/TopNews)

EUROPE New Shortwave station soon? "Euro Radio is Europe's new commercial shortwave station. Test transmissions soon. Details and frequency information will be available here once it is finalised." (Neil Armstrong WRTH 17 April). A Facebook posting from "Euro Radio 6205" seeks programme producers and podcasters to contact them at encoreradio@outlook.com. In November 2017 Euro Radio announced that it would be launching in early 2018. (Dave Kenny-UK/British DX Club)

FRANCE Good signal of NHK World Radio Japan via MBR Issoudun, May 19:
1430-1500 on 13680 ISS Farsi, including English nx
1432-1440 on 13680 ISS English and then in Farsi (DX Mix-Bulgaria)

Reception of Telediffusion d'Algerie via TDF Issoudun, May 21:
0400-0459 on 6050Arabic Holy Quran px, good
0500-0559 on 6125Arabic Holy Quran px, good
0500-0559 on 7295Arabic Holy Quran px, fair
0600-0659 on 9620Arabic Holy Quran px, good (DX Mix-Bulgaria)

Reception of FPU Radio Tamazuj via Issoudun on May 15:
0329-0427 on 7315 Juba Arabic, good signal (DX Mix-Bulgaria)

FPU Radio Tamazuj via Issoudun, May 13:
1459-1557 on 15400 Juba Arabic*, fair/good
* including English language news bulletin
1543-1553 Tue and Fri (DX Mix-Bulgaria)

Good signal of NHK World Radio Japan via MBR Issoudun on May 19:
0430-0500 on 11970 English Mon-Fri; 0500-0530 Sat/Sun (DX Mix-Bulgaria)

Reception of Alameda Bible Fellowship via Issoudun on May 18:
1700-1730 on 15485 ISS English Mon/Wed/Fri, good (DX Mix-Bulgaria)

Summer A-20 of Radio France International on 9790:
0400-0500 on 9790 ISS French
0500-0600 on 9790 ISS French
0600-0700 on 9790 ISS French
1900-2000 on 9790 ISS French
2000-2200 on 9790 ISS French (DX Mix-Bulgaria)

Reception of Radio France International RFI, May 16:
0430-0500 on 9655 ISS Swahili, good (DX Mix-Bulgaria)

GERMANY Bible Voice Broadcasting BVB via MBR Nauen on May 16:
1430-1500 on 15265 English Sat, weak/fair (DX Mix-Bulgaria)

Frequency change of Mighty KBC Radio from 49 to 31mb from May 3:
0000-0200 NF 9925 NAU English Sun till Aug. 30. 5960 from Sept. 6 in 49mb (DX Mix-Bulgaria)

Reception of HCJB Voice of The Andes via MBR Nauen, May 16:
1529-1601 on 13800 Russian Sat, good signal BUT
1601-1629 on 13800 Chechen Sat, very poor/weak! (DX Mix-Bulgaria)

NHK World Radio Japan via MBR Nauen, May 20:
0430-0500 on 6165 NAU Russian, good
0432-0445 on 6165 NAU without En nx (DX Mix-Bulgaria)

Reception of DWD Deutscher Wetterdienst in 49mb on May 16:
0600-0630 on 5905 PIN German AM mode, good
0600-0630 on 6180 PIN German AM mode, fair (DX Mix-Bulgaria)

Reception of Bible Voice Broadcasting BVB via MBR Nauen, May 8:
0501-0516 on 9735 Arabic/English Fri, very good (DX Mix-Bulgaria)

GUAM New day, new time and frequency of KTWR Trans World Radio Asia in DRM mode:
1100-1130 NF 9910 Chinese/Cantonese Sat, from May 23 (DX Mix-Bulgaria)

Revised schedule of FEBA India via KTWR Asia:
1245-1300 on 11580 TRM Malayalam Thu-Sat. Tamil Mon; English Tue; Malayalam Wed & Telugu Sun are canceled! (DX Mix-Bulgaria)

INDIA Several languages services of All India Radio / AIR External Service to the neighboring countries resumed on shortwave as follows:

0100-0200 on 7380 BGL Sindhi
0700-0800 on 9950 DEL Nepali
0700-0800 on 11620vDEL Nepali(11619.8)
0830-1130 on 9950vDEL Urdu (9949.8)
1115-1215 on 7270 CNI Tamil
1145-1315 on 17510 BGL Chinese
1215-1330 on 9450 BGL Tibetan, NOT ON 9445
1315-1415 on 11560 BGL Dari
1415-1500 on 11560 BGL Pashto, ex till 1530
1500-1530 on 11560 BGL English new, ex Pashto
1500-1600 on 9620 ALG Baluchi. Other xmsns are temporarily suspended due to COVID-19. (DX Mix-Bulgaria) Reception Reports appreciated to spectrum-manager@prasarbharati.gov.in. (Jose Jacob-India, VU2JOS/DX India)

Good signal of All India Radio AIR Ext. Sce, May 16:

1315-1415 on 11560 BGL Dari, 1415-1500 Pashto &
1500-1530 on 11560 BGL English Special COVID-19 (DX Mix-Bulgaria)

AIR Kurseong has placed a tender for a new 50 kW SW transmitter, the tender document is dated 9 March 2020. SW transmissions from Kurseong were terminated from 30 July 2019. They used to operate on 3355, 4895, 7230 etc. (Jose Jacob DX_India 16 April/British DX Club)

INDONESIA Haven't noticed much being different on SW for Ramadan. Have been regularly checking for any activity from RRI Ternate (3344.86), RRI Merauke (3905) or RRI Nabire (6125 or 7289.92), but through May 5, all have been silent. Had hoped that RRI Palangkaraya's local programming might return again to 3325, but not so. The external service with the Voice of Indonesia continues to be heard. It was only Bangladesh Betar (4750) that dropped the External Service during this Ramadan, in favor of their local Home Service programming and has an extended schedule well beyond the times of their former External Service. (Ron Howard-CA)

IRAN Wrote to IRIB in Teheran English service pointing out once again that the audio is almost non-existing, a strong carrier and speech like a whisper. This concerns the 1920-2020 transmission on 9855. However, the German transmission from Teheran now excellent reception on 7300 at 1720-1820. Very good letterbox program Sundays. The English section sent me this reply. No improvement noted so far. "Dear Ullmar Thank you for letting us know once again about the technical issue you have encountered. We have conveyed your message to our technicians and we assure you that the problem will be solved very soon. unfortunately the process of sending

QSL cards and listeners' gifts has been halted due to the coronavirus pandemic. We hope you understand the situation and you will receive the package as soon as possible. Thank you again and we would be glad to hear from you how the life is over there in Sweden in the time of this pandemic. Please let us know." (Ullmar Qvick/Shortwave Bulletin)

Additional transmissions of PARS TODAY VIRI IRIB for Muslim Holiday Ramazan - May 25 to June 25, 2020:

0023-0120 on 6160 SIR Turkish

1953-0320 on 7205 SIR Azeri

2123-2250 on 6110 SIR Tajik

2253-2350 on 7295 SIR Kurdish (DX Mix-Bulgaria)

IRELAND 6295, 1909, Reflections Europe weak with Sunday-only religious prgms, 26/4. (Bryan Clark-New Zealand/New Zealand DX Times)

ITALY Time Signal Station ItalCable is again on air, May 9:

from 0715 on 10000 Italian, fair (DX Mix-Bulgaria)

JAPAN Radio Japan is carrying NHK Newline bulletins in English in many of their language services instead of regular programming during the Covid 19 emergency. Newline in English observed for the first 15 minutes of each broadcast in Hindi 1430-1500 on 15745-mdc and 1530-1600 on 9600-tac, Urdu 1515-1545 on 11775-dha. The second half of the broadcast was a Japanese language lesson. (Dave Kenny-UK observations/British DX Club)

3925, Radio Nikkei One, Nemuro, at 1155 almost buried by North Korean jammer targeting Voice of the People, which has moved. //6055 fair. Playing Japanese pop songs. May 4. (Harold Sellers-BC /DXplorer)

KOREA (North) 9435, Voice of Korea, Kujang, at 1309, English, man with news. Good, May 4. (Harold Sellers-BC/DXplorer)

KOREA (South) 3930, Voice of the People, Goyang, at 1154 in Korean with commentary by woman. - Fair, //3905 fair, May 4. (Harold Sellers-BC/DXplorer)

KUWAIT Reception of MOI Radio Kuwait General Service in 19mb, May 18:
0500-0800 on 15530 KBD Arabic GS/Farsi, good (DX Mix-Bulgaria)

Weak/fair signal of MOI Radio Kuwait on 49mb, May 9:
0200-0630 on 5959.8 KBD Arabic GS (DX Mix-Bulgaria)

MADAGASCAR FPU Radio Tamazuj via Talata Volonondry, May 5:
1459-1557 on 15150 Juba Arabic*, fair.
* including English language news bulletin
1543-1553 Tue and Fri (DX Mix-Bulgaria)

Reception of FPU Radio Tamazuj via Talata on May 15:
0329-0427 on 11650 Juba Arabic, fair signal (DX Mix-Bulgaria)

Reception of FPU Radio Dabanga via Talata on May 15
0429-0457 on 11650 Darfur Arabic, fair signal (DX Mix-Bulgaria)

6135, Radio Madagasikara. May 20 - It was a month ago that the N. Korea jamming on 6135 was silent for a long period of time and the same thing noticed again today; nice reception of Radio Madagasikara from 1316 to 1410; mostly pop music and a few commercial announcements. Would be wonderful if this were to be a monthly event! Another fun reception! (Ron Howard-CA)

17730, AWR e-QSL received in 18 days for report sent to: gsl@awr.org, (Manuel Méndez-Spain/British DX Club)

MALI 9635, May 2, 0933, Radio Mali, African songs, Vernacular, French talk. (Méndez-Spain/Shortwave Bulletin)

MYANMAR 5985, Myanmar Radio, April 21, from 1441 to 1451. Is Tuesday, so time for another two 5 minute editions of "Learning English with BBC, Burmese"; very readable. (Ron Howard-CA)

NETHERLANDS 5940, Radio Onda, QSL card in 5 days. E-Mail: ondaasbl@hotmail.com. (Kurt Enders-Germany/DX Fanzine)

New entry of HFCC Database is Radio Piepender, registered on May 2:
0000-2400 on 3920 ZW0 001 kW Dutch via transmitter site Zwolle (DX Mix-Bulgaria)

NEW ZEALAND Frequency & other changes of Radio New Zealand RNZ Pacific from May 18:
0459-0558 NF 9700 RAN English, ex 0459-0658 on 11725
0559-0958 on 5945 RAN English, ex 0659-0958 on same (DX Mix-Bulgaria)

NORWAY Summer A-20 shortwave schedule LKB/LLE Radio Northern Star:
1300-2205 on 5895 BRG 001 kW Norwegian/English. Bergen Kringkaster but in HFCC 5895 is registered via Sveio. (DX Mix-Bulgaria)

PAPUA NEW GUINEA 3260, NBC Madang. May 12, second day reactivated; heard with the same format as yesterday; today with 1212*; poor reception. (Ron Howard-CA)

PAPUA NEW GUINEA (Bougainville) 3325, NBC Bougainville, 1015-1130 and still on the air 1328+, on May 21. Preempted regular programs to provide mostly non-stop COVID-19 coverage in Pidgin (speeches, PSAs, etc.);

one pop song (Nazareth – "Love Hurts"); well above normal reception and fairly readable; no VOI QRM; still continuing with extended COVID-19 coverage well past the normal 1200*. (Ron Howard-CA)

PERU Received this email from Radio Tarma (translation): "Due to the economic recession as a result of CORONAVIRUS and the current government's lack of interest in supporting radio stations, we have been forced to reduce our transmission time on short wave. Current schedule: 1100 to 1400 and 2200 to 0000." Mario Monteverde Pomareda, Gerente General. E-mail: gerenciageneral@grupomonteverde.com. (Manuel Méndez-Spain via HCDX mailing list/Shortwave Bulletin)

PHILIPPINES Reception of FEBC Radio/Radio Liangyou in 25mb, May 21: 1300-1400 on 11600 BOC Hui zu/Yunnan, fair (DX Mix-Bulgaria)

Radio Pilipinas is again on air from 1 May:
1730-1930 on 9960 Filipino
1730-1930 on 12120 Filipino
1730-1930 on 15190 Filipino
0200-0330 on 12010 English
0200-0330 on 15640 English
0200-0330 on 17820 English (DX Mix-Bulgaria)

ROMANIA Updated summer A-20 schedule of NEXUS IRRS Shortwave European Gospel Radio EGR/United Nations Radio UNR, including:
11-1130 Sun & 1830-19 Tue Wavescan; 18-1830 Mon World of Radio
1800-1900 on 7290 SAF English Sat-Thu
0930-1200 on 9510 SAF English Sun
Radio City
1800-1900 on 7290 SAF German 1st/2nd/3rd Fri
0800-0900 on 9510 SAF German 1st/2nd/3rd Sat
Radio Rasant

1800-1900 on 7290 SAF German 4th Fri - irreg
0800-0900 on 9510 SAF German 4th Sat - irreg (DX Mix-Bulgaria)

RUSSIA Reception of GTRK Adygeya / Adygeyan Radio in 49mb on May 11:
1800-1900 on 6000 ARM Adygean Mon, fair/good
1800-1900 on 6000 ARM Ara/Tur Mon NOT ON AIR (DX Mix-Bulgaria)

6000, Radio Adygea from Krasnodar has sent a nice QSL card via standard Post mail. Received in 45 days after sending report via E-Mail to: krasnodar@rtrn.ru. (Harald Suess -Austria/Worldwide DX Club)

SAO TOME Reception of Deutsche Welle via Pinheira on May 11:
0630-0700 on 9830 Hausa, weak to fair (DX Mix-Bulgaria)

SOMALIA 7750 USB, Warsan Radio, N/D Appreciation letter as PDF file in 1 day for e-report to: warsanradiobaidoa@gmail.com. V/s: Hilaal Sheikh, Warsan Radio Director. NB: Heard via websdr in Ticino (Switzerland). (Antonello Napolitano-Italy/DX Fanzine)

According to a text this morning from Warsan Radio staff, they are using an Icom IC-m700 maritime mobile radiotelephone transmitter, capable of running 150 watts but likely running less than that. The antenna is "4 wires, each 9 meters, with a 20 meter cable" - perhaps a 4-element beam with a 20m feed cable, it works with a consistent USB signal into Bay of Islands on most days. (Via Top News/New Zealand Radio DX Times)

SPAIN REE relay Radio Nacional de España on all 4 frequencies May 9:
1400-2200 on 9690 NOB Spanish Sat/Sun, fair
1400-2200 on 11670 NOB Spanish Sat/Sun, fair

1400-2200 on 11940 NOB Spanish Sat/Sun, good

1400-2200 on 12030 NOB Spanish Sat/Sun, good (DX Mix-Bulgaria)

SRI LANKA Frequency change of Adventist World Radio KSDA from May 6:

1530-1600 NF 15530 TRM Manumanaw Karen, ex 15150 (DX Mix-Bulgaria)

SUDAN 7205, May 2, 0502, Sudan Radio, Al Aitahab, Arabic, comments, East African songs. (Méndez-Spain/Shortwave Bulletin)

TAIWAN New time & frequency of Radio Taiwan International RTI:

1300-1400 NF 9525 PAO Thai, instead of 1200-1300 on 9625 PAO Thai Summer A-20 (DX Mix-Bulgaria)

THAILAND Frequency changes of Voice of America via Udorn Thani:

1130-1200 NF 9350 UDO Rohingya Mon-Fri, ex 9310

1130-1200 NF 9350 UDO English* Sat/Sun, ex 9310

1130-1200 on 12030 UDO Rohingya Mon-Fri UNCHANGED

1130-1200 on 12030 UDO English Sat/Sun UNCHANGED (DX Mix-Bulgaria)

TURKEY TRT Voice of Turkey in Turkish on WRONG frequency 9540 on May 4:

1400-1425 on 9610 EMR Turkish, instead of Italian! Parallel freq 9840 EMR Turkish, as scheduled in A20. Something's always wrong at TRT Voice of Turkey Emirler transmitting station. (DX Mix-Bulgaria)

Reception of TRT Voice of Turkey in 22mb & 19mb, May 19:

1130-1225 on 13760 EMR German, good/fair
1230-1325 on 15450 EMR English-fair/good (DX Mix-Bulgaria)

UNITED ARAB EMIRATES NHK World Japan Radio Japan via ENC-DMS Al-Dhabayya May 12:

1400-1430 on 11830.1 English, fair signal (DX Mix-Bulgaria)

Trans World Radio TWR Africa via ENC-DMS Al-Dhabayya, May 15:

1300-1315 on 17680 Afar Thu-Sun, good signal (DX Mix-Bulgaria)

USA Official-OCB Radio Marti canceled transmissions 0400-1000 from May 3, 2020. (Worldwide DX Club)

Frequency and other changes of USAGM VOA (various locations), updated A-20 schedule:

0130-0230 NF 17865 PHT Burmese, ex 17835

0330-0430 NF 7460 BOT Kirundi, ex 9815

0330-0430 NF 9815 SAO Kirundi, ex 7325

0400-0500 NF 6170 SAO Eng/Sho/Nde Mon-Fri, ex 9885

0430-0500 NF 7460 BOT Kirundi Mon-Fri, ex 7325 SAO

1730-1800 NF 5930 SAO English, ex 6090 (DX Mix-Bulgaria)

Reception of Alameda Bible Fellowship / ABF via WRMI#9 on May 15:

1330-1400 on 15770 English Mon/Fri, weak (DX Mix-Bulgaria)

UZBEKISTAN May 5 (Tuesday) - Radio Nyawa Sarawak via Tashkent, has resumed their SW broadcasting on 11890, now on daily from Monday to Friday; today heard with new schedule from tune in at 1104 till 1158*; in vernacular with mostly phone conversations; one brief spot in English about corruption in "East Malaysia"; mostly poor, but at times fair reception. (Ron Howard-CA)

Radio Nyawa Sarawak is again on air via RRTM Tashkent from May 4:

1100-1200 on 11890 Iban/Malay Mon-Fri, ex 1000-1100 (DX Mix-Bulgaria)

VANUATU Radio Vanuatu is the only viable means of reaching the rural poor, 80% of Vanuatu's population. A strong public broadcaster can facilitate and strengthen

improved governance and the delivery of essential services, lack of which is underlying cause of instability. (Radio Vanuatu Website)

Radio Vanuatu seems to be out of air, checked yesterday, May 16 at 1830-1900 when usually open on 3945 and no signal, today at 0720-0740 checked on 5040, 3945, 2485 and the old 7260 frequency and no signal. Checked via SDR remote receivers in North New Zealand (Manuel Méndez-Spain/Shortwave Bulletin) Confirming your observations! On May 16, with no R. Vanuatu on 5040, from 0640 to 0700. No RV on 3945, 7890 nor 11835 from 0700+. Also no RV signal on 2485, from 1000+. On May 17, no RV on 5040, at 0609. So currently off the air! (Ron Howard-CA/Shortwave Bulletin) 11835, this morning I got a reply from Robert Warren Tech Mgr at Radio Vanuatu. This is his reply: Hi Martin, We have some overgrown bush on the Balun, we will be clearing it and I will email you if the harmonics are still there. Regards, Warren Robert Technical Service Officer Agent des Services Technique (Martin Greer-Australia/Australian Radio DX Club) 11835 (harmonic), R. Vanuatu, 0709, on May 19. Stronger than China on frequency; news in vernacular (COVID-19 government subsidies to private schools, etc.); 0714, sports news (sound bites from the Minister for Youth Sports Development, Willie Pakoa Satearoto, etc.); 0716, end of news; RV ID; // 3945 // 7890 (harmonic), both with poor reception. (Ron Howard-CA)

Vanuatu has just experienced a Category 5 cyclone. The country has been devastated, hence their recently upgraded SW station has also been seriously affected. Give them a chance to recover. They are a very small island nation with very few resources. (Ken Baird-New Zealand/BrDXC-UK April 16)

VATICAN Fair/good signal of NHK World Radio Japan via SM di Galeria on May 19:

0430-0500 on 7245 English Mon-Fri & 0500-0530 Sat/Sun (DX Mix-Bulgaria)

Reception of FPU Radio Dabanga via SM di Galeria on May 15:

0429-0457 on 7315 Darfur Arabic, good signal (DX Mix-Bulgaria)

VIETNAM New email address for VOV Please send your emails to our new email address: englishsection@vov.vn. You're also invited to visit us online at vovworld.vn, where you can hear both live and recorded programmes. (VOV Letter Box 15 April via Alan Pennington-UK/British DX Club)

ZAMBIA Frequency change Zambia NBC Radio 1 in 49mb:

0230-2230 NF 5995 LUS English/other langs, ex 5915 (DX Mix-Bulgaria)

Voice of Hope Africa with updated extended schedule from May 1:

0400-1200 on 9680 LUV English tx#1, ex 0400-1100

0400-1200 on 11680 LUV English tx#2, ex 0400-1100 (DX Mix-Bulgaria)

5995, Zambia NBC, Radio 1, 0443-0456 on May 07, heard here in Lugo with fair carrier and very weak audio, Vernacular comments. Via SDR Kiwi remote receiver in South Africa strong signal. At 0456 signal cut off abruptly and did not return surely due to power failure. (Manuel Mendez-Spain, hcdx May 7/TopNews)

11680, Voice of Hope Africa, 0505-0530. Pastor Brad Bailey preaching; later from 0600+, outstanding reception of Wavescan #586 ("Paraguay on SW, part 3, after the war"); very readable with strong signal; // 9680, which was much weaker. Certainly one of their best ever receptions! (Ron Howard-CA)

ZANZIBAR 6015, 0414, RTZ Dole fair in Swahili until blocked by RRI opening 0456

on 10/4 also noted 0400 poor with drum beats & news on 28/4, (Bryan Clark-New Zealand/New Zealand DX Times)

Schedules, news and other information about shortwave broadcasting activity can be

send to Richard A D'Angelo, 2216 Burkey Drive, Wyomissing, PA 19610 or via e-mail to rdangelo3@aol.com (please indicate in the subject that your contribution is for Listeners Notebook). Thanks! 73, Rich



Pirate Radio Report

George Zeller • 3492 West 123rd Street • Cleveland, OH 44111 • georgez@nacs.net

Shortwave pirate broadcasting continued at a very brisk pace once again during the past couple of months. Pirate broadcasting inevitably increases around major North American holidays. The main major date this month is June 20, the first day of Summer in North America. This means that darkness propagation paths on a daily basis reach their lowest point of the year. Seasonal static levels on the shortwave bands therefore begin a period of increase that will last through summer. Otherwise, June lacks holidays that lead to increased pirate broadcasting levels. The last couple of days in June sometimes see early pirate activity from the July 4 Independence Day holiday in the United States.

Your editor once again apologizes for a series of abbreviated and sometimes entirely missing columns. The Corona 19 virus situation led to cancellations that utterly disrupted my schedule. While I have not been ill, this caused massive disruption with my work schedule, and it caused the unfortunate missed and abbreviated columns.

"Preventing Illegal Radio Abuse Through Enforcement" act, with an acronym of the "Pirate Act" is now law in the United States. Its official title is HR 583. This bill would provide for fines of pirate radio stations of

\$100,000 per day, with a maximum fine of \$2 million. On January 24, President Trump signed this legislation into law.

The full text of the Pirate Act as signed by President Trump is on the internet at:

<https://www.congress.gov/116/bills/hr583/BILLS-116hr583rfs.pdf>

Pirate busts by the FCC during the past month were mostly concentrated in the New York City metro area and in Florida as usual. This month we again omit the individual bust notices issued by the FCC. Some recent FM busts continued to be of both pirate operators and their landlords. Once again this month the FCC appears to have issued no citations to shortwave pirates in the United States, despite dozens of such actions against FM pirates. None of the newly authorized \$2 million fines have been assessed by the deadline date for this column in late May. The virus situation and the political instability in the USA undoubtedly was associated with this situation.

Your pirate DX news and logs for this column are always welcome. Feel free to send them in so that others can follow trends on how and where others are hearing unscheduled and ever-changing pirate radio operations on shortwave. Modes are USB unless listed.

Ballsmacker R.- 6960 AM 0101 4/14/20 fair. Prgm of classic rock mx w/a theme of Home. (Taylor-WI)

Ballsmacker R.- 6960 AM 0101-0054 4/14/20 fair. Prgm of classic rock mx w/a theme of Home. (Montney-MI)

Big Badfish R.- 5149 AM 0026 4/14/20 poor to fair. Prgm of electronic mx. (Taylor-WI)

Captain Morgan- 6924.3 0008-0054 4/19/20 good. A mix of classic rock and twilight zone audio. (Montney-MI).-

Captain Morgan- 6924.3 0013-0054 4/19/20 good. A mix of classic rock and twilight zone audio. (Taylor-WI).-

Cool AM via Mix R. International.- 4175 0117 4/15/20 good. Prgm of contemporary dance mx w/wideband USB signal. (Taylor-WI)

Damn Skippy.- 6930 0037 4/19/20 fair. Prgm of classic rock mx w/SSTV images at close. (Taylor-WI).-

Damn Skippy.- 6930 0042 4/26/20 fair. Prgm of "Ode to Billy Joe: song w/SSTV images. (Taylor-WI).-

Laser Hot Hits.- 6205t 0553 4/20/20 poor. Prgm of "mellow" mx, no clear ID hrd. (Hauser-OK).-

Laser Hot Hits.- 6205 0053 4/20/20 poor. Prgm of "mellow" mx. (Taylor-WI).-

Music Pirate R.- 6930 2056 4/22/20 fair. Prgm of mx by Prince. (Montney-MI).-

Pee Wee R.- 6930 2124 4/25/20 fair- A mix of rock/pop mx & SSTV images, some decoded better than others. (Taylor-WI).-

R. Azteca- 5170 0012 4/18/20 fair- Relay of this old classic comedy pirate. (Taylor-WI).-

R. Azteca- 5150 0023 4/24/20 fair- Radio drama and comedy sketches from this classic pirate station. (Taylor-WI).-

R. Clandestine- 5150 0147 4/14/20 fair- R.F. Burns with this old classic prgm that is still hilarious. (Taylor-WI).-

R. Free Billy- 6930 0021 4/14/20 fair. Prgm of classic rock mx w/a theme of Home. (Taylor-WI)

R. Nova- 6925 2212 4/24/20 fair. Prgm of blues mx. Some IDs in CW. (Montney-MI).-

R. Virus 19- 6931 2303 4/25/20 good- Classic rock tunes. (Perry-IL).-

R. Virus 19- 6931 0012 4/25/20 fair- Prgm of discouraging classic rock tunes. (Montney-MI).-

R. Virus 19- 6931 0012 4/25/20 fair-Prgm of mostly classic rock tunes w/discouraging titles. (Taylor-WI).-

Robin Hood R.- 6930 0237 4/19/20 fair. Prgm of rock mx w/ various SSTV images. (Taylor-WI).-

Sycko R.- 4190 0129 4/14/20 fair. Sketch urging listeners to lobby against the Panama Canal Treaty. (Taylor-WI).-- 6924.3 0008-0054 4/19/20 good. A mix of classic rock and twilight zone audio. (Montney-MI).-

V. of the Angry Pigmeat- 6950 2030-2241 4/19/20 fair. A mix of rock mx involving pigs and Pigmeat. (Montney-MI).-

Underdog.- 6955 2052 4/18/20 good. Prgm of rock mx & Underdog cartoon audio w/SSTV images at close. (Taylor-WI)

The Final Countdown.- 6955 0154 4/18/20 fair to good. A mix of classic rock mx and old TV ad audio. (Taylor-WI)

WTF R.- 4920 2344 4/18/20 good. Prgm of rock mx. (Taylor-WI)

X-FM via Mix R. International.- 4175 0117 4/15/20 poor to good. Redhat w/another prgm relay from this one including accurate TC. (Taylor-WI).- 4175 0117 4/15/20 poor to good. Redhat w/another prgm relay from this one including accurate TC. (Taylor-WI)

Yeah Man R.- 6924.7 0002 4/19/20 poor. Prgm of classic rock mx. (Taylor-WI).-

Yeah Man R.- 6924.7 0002 4/19/20 poor. Prgm of classic rock mx. (Montney-MI).-

Zeeky's Attic.- 6964 2347 4/13/20 good. Prgm of classic rock mx. (Taylor-WI).-

Zeeky's Attic.- 6964 2340 4/13/20 good. Prgm of classic rock mx. (Montney-MI).-

Zeeky's Attic.- 6924.3 2341 4/19/20 good. Mostly classic rock and a little country mx. (Montney-MI).

Contributors' Page

The following people made contributions to this issue:

Vince HENLEY, Anacortes, WA

WinRADiO G39DDCe SDR, ICOM IC-R8600, Ten-Tec RX-340, SDRPLAY RSPdx, TECSUN PL-880. Antennas: whip on PL-880 and Alpha-Delta DX-Ultra

Mark TAYLOR, Madison, Wisconsin

Perseus, Elad FDM-S2, Airspy HF+ & HF+ Discovery, Tecsun PL 880; 42 meters dipole, 100' long wire, W6LVP loops

Andre FREDETTE, Oakville, Ontario

JRC NRD 535D , Icom R-75 , PAR ES-SWL 65 ft. antenna, MFJ-959C

Ed CICHOREK-NJ

R75, SW8, MFJ956 SWL4-50 wire antenna

Rich D'ANGELO, Wyomissing, PA

Ten-Tec RX-340, Drake R-8B, Eton E1, Eton E5, Alpha Delta DX Sloper, RF Systems Mini-Windom, Datong FL3, JPS ANC-4

Eric BUENEMAN, Hazelwood, MO

Sangean ATS-803A, homebrew 30' longwire and 150' dipole

Rick BARTON, Sun City, AZ

RS SW-2000629, Satellit 205/T.5000 & 650, Kenwood R-1000, outdoor Slinky and long wires

Gianni SERRA - Roma-Italy

JRC NRD 525 receiver; Alpha Delta DX-SWL Sloper-S antenna; RG 8 mini coaxial cable; JPS NIR 12 Noise & Interference Reducer-Dual DSP outboard audio filter; JRC NVA 319 external loudspeaker unit

Loggings

Dave Turnick • 372 Spohn Road • Sinking Spring, PA 19608 • david.turnick@gmail.com

- 1760 CUBA** Unidentified numbers station at 2245. "Something's always wrong at RHC" (gh-OK). This frequency a well-known channel for RHC, but numbers station appeared here at this time (it usually would be found this hour on 10715). TX in Spanish with machine-generated woman voice, five figure number groups. - Very Good 5/4 Barton-AZ
- 3215 UNITED STATES WWCR** Nashville, TN - 4/30 0215 noted with Christian teaching from Calvary Baptist Church in New York City; SIO 434. (Bueneman-MO)
- 3320 NORTH KOREA Pyongyang Broadcast Service** 1145. Choral music, then sappy soprano vocalist. Recheck at 1300 (after local dawn here) had them still audible with M in presumed Korean (too weak by then to tell) - Fair, but steady; readable 5/2 Barton-AZ
- 3485 OPPOSITON Voice of the People**, 1134, 4/18/20 in Korean. Man speaking slowly to a man and woman alternating for a few minutes into contemporary music. Poor - fair. // 3915, Poor. (Taylor - WI)
- 3485 OPPOSITION Voice of the People** - Kyongge-do (P), 1038, 4/25/20 in Korean. Some3what martial woman vocal, woman announcer. Fair. Only N/S Korean audible this morning here. (Taylor - WI)
- 3605 UNITED STATES Radio Marti** (p), Greenville NC, in Spanish 04.08.2020 1721-1748 Holy Mass, w/ man religious sermon, talked and sung liturgy (till 1742), woman / man talk, w/ one slow music break, otherwise fair to poor/very poor in am. (Serra, Roma, Italy)
- 4765 CUBA Radio Progreso** via Bejucal - 4/30 0232 noted with commentary in Spanish; SIO 323. (Bueneman-MO)
- 4765 CUBA Radio Progreso** at 0335 with 40s / 50s jazz vocals, M presenter in Spanish - Good 4/16 Barton-AZ
- 4900 CHINA Voice of the Strait** () 1100 // 4940, woman presenter soft pop vocal music - Fair to Good May 3 Barton-AZ
- 4940 CHINA Voice of the Strait** at 1030. Pop vocal music, M presenter in Chinese. The other frequency, 4900, buried under a UTE/RTTY station this time around - Good May 2 Barton-AZ
- 5025 CUBA Radio Rebelde** CMBA Bauta - 4/30 0234 noted with commentary mentioning Puerto Rico in Spanish; SIO 333. (Bueneman-MO)
- 5850 UNITED STATES OF AMERICA The Overcomer** via WRMI Okeechobee, FL - 4/16 0746 noted with a sermon by Brother R.G. Stair in English; SIO 444. (Bueneman-MO)
- 5945 NEW ZEALAND Radio New Zealand Pacific** via Rangitaiki - 4/4 1225 noted with interview in English; SIO 444. (Bueneman-MO)
- 5945 ARMENIA BBC** - Gavar, 0048, 4/26/20, in English. Woman announcer with science program. Poor - fair. (Taylor - WI)

- 5945 **NEW ZEALAND RNZI** at 1210, W presenter, M correspondent with report on US Skylab space station - Good 4/21 Barton-AZ
- 5945 **NEW ZEALAND Radio New Zealand Int'l**, 1135, 4/26/20 in English. Start of a 1940's recording of the house band from the Hawaiian Room (didn't catch were.) Very good signal. (Taylor - WI)
- 5995 **MALI RTV du Mali** - 4/11 0637 noted with hi-life and dance music, commentary in French; SIO 323. (Bueneman-MO)
- 6005 **ASCENSION ISLAND BBC World Service** relay - 4/11 0538 noted with commentary in English. SIO 323 with ACI from Radio Havana Cuba on 6000 kHz. (Bueneman-MO)
- 6055 **JAPAN Radio Nikkei** Program One at 1200, 1980s American pop - Very good 4/21 Barton-AZ
- 6055 **JAPAN Nikkei 1** - Chiba / Nagara (P), 1144, 5/3/20 in Japanese. Woman announcer talking at length (maybe news or actuality.) Poor. (Taylor - WI)
- 6070 **CANADA CFRX**, 2331, 5-2-20. Casual ID News Radio anmt then talk but poor reception with noise (Cichorek-NJ)
- 6100 **CHINA China Radio Int'l** via Beijing - 4/4 1220 noted with commentary in Russian; SIO 323. (Bueneman-MO)
- 6105 **TAIWAN Radio Taiwan Int'l** via Kouhu - 4/21 1022 noted with commentary in Chinese; SIO 333. (Bueneman-MO)
- 6120 **CHINA PBS Xinjiang** - Changji (Urumqi), 1215, 4/18/20 in Uighur. Man and woman. Poor. (Taylor - WI)
- 6155 **AUSTRIA Oesterreich Rundfunk**, *0459-0514 Apr 25, carrier popped on a man announcer began speaking in the German language. Soft instrumental music at 0500 followed by another man with the news. Fair to good. (D'Angelo-PA)
- 6170 **NEW ZEALAND RNZI** in EE. April 27, 2020, 1437 - 1445. SIO 344. OM announcer, MX program with pop MX. Calypso tune. Listed target is Oceania. Moderate QRN, shallow, rapid QSB. More pop MX. Listenable. (Henley, WA)
- 6170 **NEW ZEALAND RNZI** in EE. April 27, 2020, 1437 - 1445. SIO 344. OM announcer, MX program with pop MX. Calypso tune. Listed target is Oceania. Moderate QRN, shallow, rapid QSB. More pop MX. Listenable. (Henley, WA)
- 6185 **MÉXICO Radio Educación XEPPM** México, DF - 4/21 0957 noted with Latin Jazz music, commentary in Spanish. SIO 333, but undermodulated. (Bueneman-MO)
- 6185 **MEXICO [and non-]. XEPPM**, May 6 at 0617, XEPPM fair modulation, enough to tell that it's the finale of Beethoven's Ninth, but played on keyboard, with a bit of choral; 0620 segue to Pomp & Circumstance. They used to have a detailed playlist but now can't even program grid schedule at <https://radioeducacion.edu.mx/> (Glenn Hauser, OK, WOR) find a
- 6185 **MEXICO XEPPM** 0530, Mexico's answer to Radio Nikkei? Female vocal music, Cuban rhythm, then jazz piano - Very Good 4/29 Barton-AZ
- 6195 **SINGAPORE BBC World Service** relay - 4/21 1004 noted with news in English; SIO 222. (Bueneman-MO)
- 6195 **OMAN BBC** - A'Seela, 0051, 4/26/20, in Dari. Man and woman announcers alternating with short sections. Poor - fair. (Taylor - WI)
- 7230 **IRAN Islamic republic of Iran**, 00:17 GMT, April 13, SIO 323 French program: Woman with cultural talk on historical subjects. Followed by traditional music with cut off at 00:21. Interference from North American ham radio operators. (Fredette-ON)

- 7230 **IRAN VoIRI** – Sirjan, 0013, 4/25/20 in Spanish. Man speaking slowly, into a woman then man with fairly long sections, instrumental music. Fair. // 9315, fair. (Taylor – WI)
- 7295 **FRANCE Radio Algerienne Chaine-1** at 0520, Prayer chanting, N AFR style male vocal music, M in Arabic - Good 4/28 Barton-AZ
- 7335 **UNITED STATES Radio Martí** via Greenville, NC – 4/4 1148 noted with Jazz program and ID in Spanish; SIO 555 with no Cuban interference. (Bueneman-MO)
- 7355 **SINGAPORE BBC** in KK relay via Kranji. May 2, 2020, 1643 – 1648. SIO 333. YL host / announcer. Interviews and commentary with OM. Some EE audio clips. Noisy signal
- 7355 **SINGAPORE BBC** in KK relay via Kranji. May 2, 2020, 1643 – 1648. SIO 333. YL host / announcer. Interviews and commentary with OM. Some EE audio clips. Noisy signal with heavy QRM and steep QSB. Listed target is FE. (Henley, WA)
- 7355 **JAPAN NHK World Radio** at 1100. News in English by man, woman. World news headlines to 1110 when they abruptly made language switch to Russian – armchair 4/18 Barton-AZ
- 7355 **ALASKA KNLS** at 1400 Opening in Chinese, and with strong signals – Good 5/1 Barton-AZ
- 7375 **ROMANIA Radio Romania Int'l** via Galbeni – 4/30 0222 noted with Classical music and brief commentary in Spanish; SIO 545. (Bueneman-MO)
- 7380 **CUBA Radio Habana Cuba**, 2323, 5-2-20. ID at 2323 with end of news the into discussion about COVID19. Poor with QRN. (Cichorek-NJ)
- 7390 **FRANCE Radio France Int'l** via Issoudun – 4/19 0547 noted with discussion and commentary in French; SIO 323. (Bueneman-MO)
- 7395 **ALASKA KNLS** “New Life Station” religious broadcaster in CC. April 28, 2020, 1348 – 1359. SIO 555. ID and contact information given slowly by YL and OM announcers in Mandarin. Switch to different OM with religious homily. Slight, shallow QSB, increasing QRN. Off air at 1359 and replaced on this frequency by CRI. (Henley, WA)
- 7410 **CHINA China Radio Int'l** . April 27, 2020, 1448 – 1456. SIO 555. Excellent signal. Pop MX, rock. YL vocalist, mixed backup singers. YL announcer. ID and contact information given by YL in JJ. More pop MX with OM vocalist. (Henley, WA)
- 7410 **CHINA China Radio Int'l** . April 30, 2020, 1449 – 1457. SIO 444. Pop MX. Listed target is FE. YL host / announcer with commentary and long monologue in JJ. More MX, then CRI ID with contact information. (Henley, WA)
- 7460 **BOTSWANA Voice of America** at 0420 W in (listed) Kirundi (Uganda, Tanzania, et al) – Very Good 4/24 Barton-AZ
- 7465 **SINGAPORE BBCWS** (Kranji) 1440 news pgm in Dari – Good 4/19 Barton-AZ
- 7490 **UNITED STATES WBCQ**, 2140, 4-23-20. Comical program about Santa Claus. Address given by female for comments on program. Good (Cichorek-NJ)
- 9275 **PHILIPPINES. Radio Liangyou** – Bocaue, 1159, 4/25/20 in Mandarin. Woman talking to 1400 fanfare, ID brief pause then a man (maybe program introduction), woman announcer, hymn into a longer talk by a 2nd man. Fair. Best reception of the Hong Kong produced program in some time. (Taylor – WI)
- 9400 **PHILIPPINES Radio Liangyou** 1 – Iba, 1204, 5/3/20 in Mandarin. Instrumental music, man announcer, hymn into sermon by same man. Fair. (Taylor – WI)

- 9410 **SÃO TOMÉ E PRÍNCIPE *BBC World Service*** relay – 4/11 0600 noted with program previews into news in English; SIO 323. (Bueneman-MO)
- 9410 **SINGAPORE *BBCWS*** at 1100. Headlines, not the usual armchair Rx usually heard, and the 6195 // was much better - Fair 4/20 Barton-AZ
- 9410 **SAO TOME *BBC WS* 0610** which news magazine current events, many mentions of covid-19, ID on the half-hour by woman – Fair May 3 Barton-AZ
- 9420 **GREECE *Helliniki Radiophonia***, 19:57 GMT, April 20, SIO 333, Greek program: Man speaking followed by folk music, news at 20:00, Good to fair with moderate fading. (Fredette-ON)
- 9420 **GREECE *Voice of Greece***, 2316, 5-2-20. Lively Greek pop vocals. Good with slight fading. (Cichorek-NJ)
- 9420 **GREECE *Voice of Greece*** – Avlis, 2115-2217 Apr 22, pop music vocals followed by a man announcer with talk in the Greek language. Nice station ID at 2200 followed by a woman announcer with the news. Good signal. (D'Angelo-PA)
- 9420 **GREECE *Voice of Greece*** 2305 Missed ToH, chanting like vocal music, guitar music typical of Greece, W presenter heard on rechecks afterwards and up to 0230 (4/19 UTC by then). - Good 4/18 Barton-AZ
- 9435 **NORTH KOREA *Voice of Korea*** from Kujang in FF. April 27, 2020, 1421 – 1436. SIO 444. Solemn MX, Instrumentals with YL chorus. YL announcer. Listed target is NAM. Short announcements in FF between MX pieces. (Henley, WA)
- 9435 **NORTH KOEA *Voice of Korea*** – Kujang, 1331, 4/19/20. DPRK orchestral music. Supposed to be in English, however the music was lulling me back to sleep, so I moved on before anyone said anything. Fair signal. (Taylor – WI)
- 9500 **CHINA *CNR1 Voice of China*** Shijiazhuang – 4/21 1005 noted with news and commentary in Chinese; SIO 323. (Bueneman-MO)
- 9510 **SINGAPORE *BBC***, 1332, 4/19/20 in Bengali. News with a woman reader and man correspondent with several reports. Poor – fair. (Taylor – WI)
- 9535 **CHINA *Fire d\Dragon jammer***, 2030, 4/15/20. Fire dragon loop of percussive music vs. Radio Free Asia in Mandarin via Saipan, Mariana Islands. Jammer fair. (Taylor – WI)
- 9550 **CHINA *China Radio Int'l*** (via Beijing) 1230, program traditional Chinese music, strings and flutes, W presenter in Vietnamese - Very Good May 3 Barton-AZ
- 9555 **TAIWAN *Radio Taiwan Int'l*** via Paochung – 4/4 1201 noted with news and commentary in Chinese; SIO 323. (Bueneman-MO)
- 9560 **OPPOSITION *Furusato no Kaze*** – Tanshui, Taiwan, 1449, 4/19/20 in Japanese. Woman and man announcers alternating. Poor. (Taylor – WI)
- 9580 **ALASKA *KNLS*** “New Life Station” in EE. April 28, 2020, 1423 – 1430. SIO 444. OM preacher with homily. The “Prodigal Son” parable. Steep QSB. “The Journey” program. ID and contact information given. The “Plugged In” show. Pop / Rock MX follows with YL vocalist. (Henley, WA)
- 9580 **ALASKA *KNLS*** religious broadcast in EE. April 30, 2020, 1415 – 1425. SIO 555. YL host with homily and story narrative about acts of kindness. Contact information given to receive a Bible. Pop MX. Shallow QSB. Easily listenable. (Henley, WA)
- 9580 **CUBA *China Radio Int'l*** via Quivicán – 4/19 0240 noted with interviews and commentary in Chinese; SIO 555 with distorted audio. Also noted 4/30 0205 with news analysis in Chinese; SIO 545 with normal audio. (Bueneman-MO)

- 9580 **ALASKA KNLS**. 9580, May 6 at 1452, KNLS is again on correct frequency instead of 9695, S5-S7 ID as ``Your New Life Station``, P O Box address in Anchor Point (Glenn Hauser, OK, WOR)
- 9615 **PHILIPPINES BBC** (via Tinang relay) at 1545. M and W in English lang. dialogue to what surely was English-Korean language lesson, ID in Korean at ToH - Poor 4/21 Barton-AZ
- 9635 **TURKEY Voice of Turkey**, 20:15 GMT, April 17, SIO 333, French program: Arabic music.
- 9655 **FRANCE Radio Algerienne**, Holy Quran, 20:12 GMT, April 17, SIO 444, Arabic program: Man religious chants. Cut-off at 20:13. (Fredette-ON)
- 9665 **NORTH KOREA Korea Central Broadcasting Service** – Pyongyang, 1400, 4/19/20 in Korean. 3+1 time pips, 2 choir songs, brief man announcer into another choir. Poor. (Taylor – WI)
- 9675 **CHINA China Radio Int'l** RR. April 28, 2020, 1415 – 1422. SIO 444. YL announcer in RR. News, interviews, and commentary in RR. Listed target is FE. (Henley, WA)
- 9675 **SAUDI ARABIA Radio Saudi Int'l**, 20:11 GMT, April 17, SIO 333, Turkish program: Man talking. Fair to good with atmospheric noise. (Fredette-ON)
- 9675 **CHINA CNR1** Beijing – 4/14 0105 noted with news and commentary in Chinese; SIO 323. (Bueneman-MO)
- 9680 **TAIWAN Radio Taiwan international**, 13:41 GMT April 14, SIO 222 Chinese program: Man talking followed by music and more talking. Fair with much flutter. (Fredette-ON)
- 9680 **TAIWAN Radio Taiwan Int'l** via Tanshui – 4/4 1143 noted with commentary in Chinese; SIO 333. (Bueneman-MO)
- 9705 **VATICAN CITY Vatican Radio**, 20:03 GMT, 17 April, SIO 222, English news program: News on pandemic. Discussion on Pope's speech. ID at 20:01, fair with noise. (Fredette-ON)
- 9710 **CHINA China Radio Int'l** via Kashgar – 4/14 0135 noted with commentary in Spanish; SIO 323. (Bueneman-MO)
- 9720 **NORTHERN MARIANAS ISLANDS Radio free Asia**, 19:36 GMT, April 14, SIO 222, Chinese program, Marshal Music, fair to poor with much flutter. (Fredette-ON)
- 9730 **ALASKA KNLS** religious broadcast in RR. April 29, 2020, 1543 – 1559. SIO 555. OM and YL with homilies. Excellent signal. Listed target is FE. Pop MX in EE with OM vocalist at 1547. New OM announcer with ID after MX with address and other contact information given. More pop MX follows. Off air at 1559. (Henley, WA)
- 9730 **ALASKA KNLS** at 1530 with long lecture by W in (listed) Russian - Good May 3 Barton-AZ
- 9740 **UNITED KINGDOM Voice of America** 2117, 4-23-20. Woman with brief French message then English lessons Fair to good. (Cichorek-NJ)
- 9760 **CHINA China Radio Int'l** via Kunming – 4/4 1204 noted with news and commentary in English; SIO 222. (Bueneman-MO)
- 9760 **ALASKA KNLS** at 1530. Pop, long talk by W in Chinese dialect, piano music bridge to M in Chinese – Good 4/26 Barton-AZ
- 9765 **MADAGASCAR KNLS**, 2112, 4-23-20. Religious choral singing, poor. (Cichorek-NJ)
- 9770 **TURKEY Voice of Turkey** 0415. Turkish music with flutes, M in (listed) Turkish - Good 4/26 Barton-AZ

- 9792 **UNIDENTIFIED 2041**, 4/08/20 in unrecognized language. Several medium speed ballads by woman in a row eventually with a man announcer. Moved down to 9792.0 at 2045, Man with a brief announcement (if an ID, I couldn't identify it even after listening to the recording,) into a similar ballad style by a man. Good. (Taylor - WI)
- 9800 **GERMANY AWR**, 2100 4-23-20. ID in English by woman then male with presumed religious talk in listed Nigerian Pidgin. Poor with JBA audio. (Cichorek-NJ)
- 9800 **GERMANY Adventist World Radio** - Nauen, 2111, 5/2/20 in Nigerian English. Familiar contemporary hymn, brief message by a male announcer, postal address in Abuja into the same man with a sermon. The English was both Nigerian accented and closer to a pidgin dialect. Fair. (Taylor - WI)
- 9840 **VIETNAM Voice of Vietnam** via Son Tay - 4/21 1011 noted with commentary in English; SIO 323. (Bueneman-MO)
- 9840 **VIETNAM Voice of Vietnam** at 1445. W in (listed) Indonesian, pop vocal music to ID and English at the ToH. Noted het hum likely from co-channel source, maybe Turkey at this time - Fair/Good May 3 Barton-AZ
- 9840 **VIETNAM Voice of Vietnam** at 1130. Best Rx in quite a while. W presenter, "News from Vietnam and around the world" - Very Good 4/29 Barton-AZ
- 9840 **UNITED ARAB EMIRATES. Deewa Radio (Voice of America)** - Dhabbaya (P), 0215, 5/1/20 in Pashto. Woman announcer talking at length w/ mention of Washington, DC. Fair. (Taylor - WI)
- 9865 **INDIA All India Radio** Vividh Bharati - Bengaluru, 1415, 4/19/20 in Hindi. Surprised to hear a program of Indian film music with a woman announcer. Poor. (Taylor - WI)
- 9870 **SAUDIA ARABIA BSKSA Radio Saudi** 2109, 4-23-20. Man in Arabic with talk .Poor (Cichorek-NJ)
- 9880 **ARMENIA BBC** - Gavar, 0214, 5/1/20 in Pashto. Man announcer, BBC stinger, man and woman introduction to a program of street sounds including domestic animals with woman continuing. Fair. (Taylor - WI)
- 9915 **MADAGASCAR BBC WS** (via relay) at 0415. Heard on Grundig Satellit 205, indoor wire. Interview program, news headlines by man on the bottom, with China revising death count in Wuhan - Very Good 4/17 Barton-AZ
- 9940 **ESWATINI (SWAZILAND) Trans world Radio Africa**, 19:54 GMT, April 17, SIO 222, Lingala program: Man talking to another man. Fair, barely above noise level. (Fredette-ON)
- 10345 **CUBA Unidentified Numbers Station** at 0611. In progress at tune-in, w/ Spanish - machine-generated woman voice, five figure number groups, and HM-01 digital text file transfer - Very Good Apr 17 Barton-AZ
- 11440 **CHINA CNR 1** jammer, 1428, 4/19/20 in Mandarin. Man and woman alternating. Poor - fair. Many // including 11580, fair, 9900. 9920, 9990, 15110. (Taylor - WI)
- 11530 **OPPOSITION Denge Welat** - Issoudun, FRANCE (P), 2048, 5/2/20 in Kurdish. Man with short talk into very nice distinctive a Capella Kurdish music. (Taylor - WI)
- 11570 **ARMENIA Iran Int'l** (p.), in Farsi 04.25.2020 1040-1047 two men talk in turns, music pause and man talk above, woman / man talk in turns (some ment. Iran), w/ slow music pause in background; better in ssb, ceaseless fast qsb. Moderate qrn, strong when fading, poor/almost fair at times (Serra, Roma, Italy)

- 11590 ARMENIA TWR India**, Gavar, in Hindi / English 05.02.2020 1335-1418 man sermon till 1339, Indian singsong chant w/ percussions music sound, same man announcement, lively Indian song w/ instrumental music, other man announcement, one IS at 1345 (the major tune of the Principality of Monaco National Anthem), music pause, man brief announcement(Serra, Roma,Italy)
- 11610 NORTHERN MARIANAS Radio Free Asia** in CC via Tinian. May 2, 2020, 1636 – 1642. SIO 233. OM announcer in Mandarin. Some QRM from CNR, heavy QRN and QSB. MX. Listed target is FE. Listenable with difficulty. (Henley, WA)
- 11610 UNITED KINGDOM Voice of America**, 19:11 GMT, April 23, SIO 444, Tigrinya program. ID at 19:11 as VOA, discussion on Corona virus. Man talking. Good reception. (Fredette-ON)
- 11610 MADAGASCAR World Christian Broadcasting**/The Light of Life at 2130.Heard wit W, then M in Chinese with long and presumably religious monologues. M and W in Chinese. Sounded like a radio drama production, ending with KNLS identifying music – Fair to Good 4/28 Barton-AZ
- 11640 MALI China Radio international**, 20:18 GMT, April 18, SIO 323, English program: Radio drama show. Good to fair with moderate fading. (Fredette-ON)
- 11640 CHINA China Radio Int'l** (500 kW via Jinhua) 0815 M and W in Chinese (Mandarin). Very powerful on this otherwise quiet band at 1:15 AM local time – Perfect 4/17 Barton-AZ
- 11720 NEW ZEALAND RNZI** at 0545. W presenter with news report on Pacific region and Corona Virus– Fair/Good 4/17 Barton-AZ
- 11740 SINGAPORE NHK Radio Japan** in Burmese via Kranji. April 29, 2020, 1450 – 1458. SIO 444. OM and YL announcers with commentary and news items. Listed target is SEA. (Henley, WA) with heavy QRM and steep QSB. Listed targ ET is FE. (Henley, WA)
- 11760 CUBA Radio Habana Cuba** (Bauta) 2305, 5-2-20. Lively Latin vocals, good reception with slight fade. (Cichorek-NJ)
- 11769 NIGERIA Voice of Nigeria**, in Arabic/ from about 1600 in Vernaculars / from 1628 in English 04.12.2020 1544-1639 woman/man talk, brief music pause, other man talk about coronavirus till 1549 (w/ some ment. Arabiya), another man talk briefly above song and long talk only, w/ same brief song pauses at times(till 1557), other man announcement, some percussions and bow instrument sound till 1559, fair/almost good (Serra,Roma,Italy)
- 11770 NIGERIA Voice of Nigeria**, 19:17 GMT, April 23, SIO 333, Fulfulde program: Man talking. Just above the noise level, some fading. (Fredette-ON)
- 11770 NIGERIA Voice of Nigeria**, 2058, 5-2-20, 2058. Male talking in listed Hausa to 2059 then abrupt end of transmission. Very weak. (Cichorek-NJ)
- 11770 CHINA Xinjiang People's Broadcasting Station** Urumqi – 4/5 0202 noted with news and commentary in Chinese; SIO 222. (Bueneman-MO)
- 11780 BRAZIL RN da Amazonia**, 2303, 5-2-20. Instrumentals and romantic sounding vocal. Fair to good. (Cichorek-NJ)
- 11780 BRAZIL Radio Nacional d. Brasilia** 2230 with news by W in Portuguese. Note that "news" sounds the same in Portuguese as in Spanish. M and W ping-pong style, many mentions of "KOR-onah VEE-rus" – Very Good 4/16Barton-AZ
- 11795 TURKEY Voice of Turkey**, Emirler, in Farsi 04.18.2020 0931-0956 woman talk till 0934:16", slow pop song, man talk, beating sound pause w/ woman brief

- announcement above, Middle Eastern and pop songs, , w/ moderate qrn rustle when fading, almost good /fair when fading (Serra,Roma,Italy)
- 11800 CUBA Radio Havana Cuba** via La Habana – 4/30 0242 noted with commentary, ID and sports report in Spanish; SIO 444. (Bueneman-MO)
- 11810 ASCENSION ISLAND BBC** 19:20 GMT, April 23, SIO 222, English program: news program, lady reading the news. Barely above the noise level. (Fredette-ON)
- 11820 SAUDIA ARABIA BSKSA Radio Saudi**, 2105, 5-2-20. Holy Quran recitation. Fair with noise. (Cichorek-NJ)
- 11820 CHINA China Radio Int'l** (via Xianyang) 0030. Long talk by W in Chinese (or Cantonese), piano music, female vocal music – Fair 4/26 Barton-AZ
- 11825 CHINA China Radio Int'l** (Beijing) 1725 tune-in, music and talk in (listed) Croatian. W with ID and sked ancmts at 1738, then interesting music that was a combination of traditional Chinese music and rap - of all things - Good 4/19 Barton-AZ
- 11859 SAUDI ARABIA Republic Yemen Radio** (p), in Arabic 04.07.2020 1725-1743 man talk, man host talk, w/ two brief music breaks, other men chatting till 1732, slow music pause, man brief announcement, woman talk above same music, Arab singsong chant fair/almost fair/poor at times from about 1735 (Serra, Roma,Italy)
- 11870 SRI LANKA Adventist World Radio** in CC. April 25, 2020, 1448 – 1456. SIO 444. YL announcer with monologue, possibly religious. Listed target is FE. Long monologue, followed by MX hymn with YL chorus at 1453. (Henley, WA)
- 11880 CUBA China Radio Int'l** in EE relay via Havana. April 28, 2020, 1406 – 1412. SIO 343. “Round Table” show from Beijing with discussion of Chinese popular culture. Various OM and YL commentators. Moderate QRN. Listenable. Listed target is WNA. (Henley, WA)
- 11880 CUBA China Radio Int'l** in EE relay via RHC. April 21, 2020, 1510 – 1520. SIO 433. YLs in talk with news and discussion of the Corona virus. This seems to be more erroneous statistics and propaganda from the PRC. The statistics being quoted are obviously false. Round table discussion among YL participants. Talk of virus antibody testing, but it isn't clear that China is actually doing any or has the capability of doing any. Some anti-Trump commentary. Listed target is WNA. Moderate QRN, increasing as the sun rises higher here. Shallow QSB, but easily listenable. (Henley, WA)
- 11900 SAO TOME & PRINCIPAL Voice of America**, 21:18 GMT, April 16, SIO 323, French program with English lessons. Man and woman talking. ID at 21:20. Used USB due to interference. Fair. (Fredette-ON)
- 11905 SRI LANKA Sri Lanka Broadcasting Corporation** – 4/27 0040 noted with commentary in Hindi; SIO 222. (Bueneman-MO)
- 11910 SAO TOME Voice of America** at 1730. Some familiar strains of VOA, long talk with M (listed Sudanese Arabic) to close on schedule at a minute before the hour - Poor 4/20 Barton-AZ
- 11930 UNITED STATES Radio Marti** in SS from Greenville, NC. April 25, 2020, 1441 – 1446. SIO 555. Latin MX, Om announcer. Good signal, but steep QSB to JBA. Little QRN. Latin MX continues with OM vocalist. (Henley, WA)
- 11955 GUAM KSDA / AWR** at 2200 First time heard in a couple weeks. Pacific Island sounding music, M in (listed Indonesian), some more music at 2222 - Fair 4/24 Barton-AZ

- 11965 MADAGASCAR World Christian Broadcasting, African Pathways Radio**, 20:51GMT, April 8, SIO 444, English program: Religious sermon on Jesus and Easter. Followed by African pop music. Cut off at 20:58. Very good signal, little fading. (Fredette-ON)
- 11995 FRANCE Radio France Int'l**, 19:26 GMT, April 23, SIO 222 French program: African news program. Barely above the e noise level. (Fredette-ON)
- 12015 CHINA China Radio Int'l** (via Beijing) 1700, talk show with W presenters on schools in China - Good 4/21 Barton-AZ
- 12045 THAILAND Voice of America** Relay in KK via Udon Thani. April 25, 2020, 1436 – 1440. SIO 555. Same VOA feed as from Tinang on 12080. Pop MX, YL announcer, more pop MX. (Henley, WA)
- 12045 JAPAN NHK World Radio** at 1530 pop song and dialogue with man and woman in Japanese – Poor to Fair 4/19. Barton-AZ
- 12080 PHILIPPINES Voice of America** in KK relay via Tinang. April 25, 2020, 1431 – 1436. SIO 555. Pop MX, YL announcer between songs. More MX follows with an YL vocalist. Listed target is FE. Slight, shallow QSB. (Henley, WA)
- 12095 ASCENSION ISLANDS BBC** 20:23 GMT, April 18, SIO 333, English program: Lady talking, news on covid-19. Fai with some interference and fading. (Fredette-ON)
- 13605 UNITED STATES Radio Marti** in SS. April 22, 2020, 1518 – 1524. SIO 233. OM announcer, Latin MX with OM vocalist. Weak signal, but listenable. Moderate QRN, slow, shallow QSB to JBA. (Henley, WA)
- 13630 BOTSWANA Voice of America**, 17:35 GMT, April 21, SIO 333, Portuguese program: Man talking. Good to fair with some fading and atmospheric noise. (Fredette-ON)
- 13630 MALI China Radio Int'l** (via Bamako) 2000. W in English. Signal good, but station buried in atmospheric noise so all I can get out of it is that it is in English - Poor/Fair 4/26 Barton-AZ
- 13650 JAPAN NHK World Radio (Radio Japan)** at 2258. Familiar Japan music box tuning signal to sign-on by man Japanese and Thai, then programming in Thai. Went on until right at 2301, when completely pointless Chinese restaurant background music obliterated Japan from the CRI relay site in Quivican, Cuba. The former Portuguese service of CRI to Brazil has given way to this pointlessness for months now - Good 5/4 Barton-AZ
- 13700 CUBA Radio Habana Cuba** in SS. April 25, 2020, 1425 – 1430. SIO 555. Excellent signal. Latin MX, listed target is WNA. OM announcer with commentary, more Latin MX follows. Slight, shallow QSB. (Henley, WA)
- 13700 CUBA Radio Habana Cuba** – Bauta, 1317, 5/2/20 in Spanish. ID then a series of short sections by different people. // blobs approximately 13634, 13568 lower & 13766, 13862, 13898 higher from malfunctioning transmitter noted many times on this frequency by Glenn Hauser. (Taylor – WI)
- 13710 SAUDI ARABIA Radio Saudi**, 17:38 GMT, April 21, SIO 433, Arabic program: Religious program, man singing religious songs. Various chants. Good to fair with some flutter. (Fredette-ON)
- 13710 SAUDI ARABIA Radio Saudi** 1700, M in Arabic, call to prayer, first heard in weeks – Good May 3 Barton-AZ
- 13740 FRANCE Radio France international**, 17:41 GMT, April 21, SIO 334, French program, News on Corona Virus and steps to take to protect yourself. Discussion

on masks and how some companies are now making masks and ventilators locally. Man and woman talking. (Fredette-ON)

- 13840 NEW ZEALAND Radio New Zealand Pacific** via Rangitaiki – 4/3 0045 noted with interviews in English; SIO 323. (Bueneman-MO)
- 13845 UNITED STATES WWCR** at 1930. Pastor Melissa Scott lecture in progress. Noted still no // on 11775, even on Sunday. Mark Coady in Ontario has suggested the Caribbean Beacon stopped transmitting around the time COVID-19 appeared on Anguilla. He may be right. L week ago, I did hear a middle of the night comment from PM Scott about a power outage at the TX site, but couldn't tell if this was a recent recording, or an old leftover from when the hurricane hit the area. But the Caribbean Beacon remains off at this writing – Very Good 4/19 Barton-AZ
- 15000 HAWAII WWVH** Kekaha, Kauai – 4/30 0249 noted with time signals, UTC time checks and advisories in English. SIO 323, taking out WWV. (Bueneman-MO)
- 15205 SAUDI ARABIA Broadcasting Service of the Kingdom of Saudi Arabia** – Riyadh, 1627-1709 Apr 22, man with recitations in the Holy Quran program. Later man announcer with Arabic language talk. Fair to good signal. (D'Angelo-PA)
- 15285 FRANCE Manara Radio Int'l** (p), Issoudun, in Hausa 04.14.2020 1649-1659 (frequency shifted from 15285.03 to 15285.02 and vice versa several times per minute) man talk, brief chant break, some men chatting till 1658, then only lite s/on; better in ssb, ceaseless fast qsb w/ strong qrn rustle, poor/almost fair at times (Serra,Roma,Italy)
- 15410 FRANCE Eye Radio**, Issoudun, in English w/African accent, and listed Sudanese Arabic 04.20.2020 1620-1641 man reading news in English (ment. Sudan), same man continuing talk w/ music break, tribal shouting w/ drum beating, man announcement in Sudan Arabic (poss. ID), music pause, other man talk about coronavirus (ment. Sudan, Ethiopia, Kenya, Cuba, Botswana etc.) Till 1633 ceaseless fast qsb, moderate qrn rustle, almost well. (Serra, Roma, Italy)
- 15580 BOTSWANA Voice of America**, 15:35 GMT, April 9, SIO 333 English program: Don Mclean "Miss American Pie" More American pop songs. American DJ with phone in calls. Good with some fading. (Fredette-ON)
- 15580 BOTSWANA Voice of America**, 20:30 GMT, April 15, SIO 223, English program: African pop music. ID at 20:31 "VOA African Service" African Beat show. Fair with some fading. (Fredette-ON)
- 15754 KUWAIT Radio Mashaal**, in Pashto 04.11.2020 0851-0918 man interviewing other man by phone till 0857, slow Middle East song, music pause, man talk (mostly unclear), woman talk w/ one music break and one external talk services (presumed news, ment. Taliban) till 0905, poor/ very poor at times w/ almost same conditions as frequencies above. (Serra, Roma, Italy)
- 17640 ASCENSION ISLAND BBC**, 16:43 GMT, April 15, SIO 333, English news: Program on Covid-19 and how people are reacting. Good with some fading. (Fredette-ON)
- 21504 SAUDI ARABIA BSKSA** Riyadh, in Arabic 04.24.2020 1450-1457* man talk, and interviewing other man talk (till 1453), Arab chant w/ instrumental music, man and woman talk, same man final announcement and s/ off at 1457 as scheduled; steady signal, lite qrn rustle, good; (Serra,Roma,Italy)



Jerry Berg • 36 Eastern Ave • Lexington MA 02421-7538 • jsberg@rcn.com

<www.ontheshortwaves.com> Update, April 19, 2020 -- I believe there are a couple of different versions of the QSL pamphlet that was used in the 1930s by Venezuelan station YV1RC-YV2RC, "Broadcasting Caracas." You can see one of them in the shortwave broadcast section of "The CPRV Gallery" (under "YV1RC"). Now we have found a similar item, "Welcome to Venezuela via YV2RC," which is a 16-page promotional pamphlet rather than a QSL. It contains some of the same text and graphics as the QSLs, but some different content as well. We have posted the pamphlet under "DX History/QSLs & Other Station Memorabilia." - And thanks to Colin Miller for the recording of Radio Republik Indonesia, Pekanbaru, from the late 70s/early 80s, probably 5885 kHz, 5 kw. Find it under "Specialized Resources/The DX Recordings of Colin Miller."

<www.ontheshortwaves.com> Update, April 26, 2020 -- We conclude our series of photos from the *Globe Circler*, bulletin of the International DXers Alliance. Look for **IDA Photo Album IV** in "DX History/Clubs & Publications." It contains 50 photos of local and international broadcasters. We have also posted a copy of the IDA By-Laws from the 1930s.

<www.ontheshortwaves.com> Update, May 3, 2020 -- If you could use a little DXercise to counter COVID vegging, check out the two items we have posted under "DX History/QSLs & Other Station Memorabilia." One is an exercise folder from mediumwaver CMCQ, Havana, Cuba, and shows 12 exercises to keep you fit. From the Dave Thomas materials, it is probably dates from the period 1930-1932. The other item is an exercise folder from the African Broadcasting Company Ltd., which operated from 1927 to 1936 (when the SABC came into existence). It shows an exercise routine for each day of the week, and it also lays out "Fourteen Rules of Health." Nothing about wearing masks. I like #13: ""Be cheerful, and learn not to worry."

<www.ontheshortwaves.com> Update, May 10, 2020 -- We have on hand a bunch of receiver spec sheets from (mostly) the 1950s through the 1980s that should bring back some nice memories. No doubt many of these sets--at least the "newer" ones--are still in use, or at least occupying places of honor in DX attics and closets. We will post these sheets in several groups, oldest sets to newest, under "DX History/Equipment & Advertising." The first group, **Spec Sheets I**, covers these sets: Hammarlund HQ-120 (1938), Hammarlund HQ-145 (1959), Hammarlund HQ-180 (1959), National HRO-500 (1964), Galaxy R-530 (1967), Hallicrafters SX-122A (1967), Drake SW-4A (1967), Hallicrafters SX-133 (1968), and Drake SPR-4 (1969). More to come. -- And under "Specialized Resources/The DX Recordings of Colin Miller," we have posted one of Radio Afghanistan, from the early 1970s. *Tnx, Colin.*

Index

Book

WRTH, 7, 33

Broadcaster

BBC, 8, 12, 13, 14, 15, 25, 30, 36, 43, 44, 45, 46, 47, 48, 50, 51, 52

RFA, 4

VOA, 7, 8, 16, 17, 38, 49, 50, 51, 52

Country

ALASKA, 30, 45, 46, 47

ARMENIA (Armenian S.S.R.), 30, 43, 48, 49

ASCENSION ISLAND, 44, 50, 51, 52

AUSTRIA, 31, 44

BANGLADESH (East Pakistan)(India), 31

BOTSWANA (Bechuanaland), 45, 51, 52

BRAZIL, 31, 49

BULGARIA, 31

CANADA, 31, 44

CHILE, 31

CHINA, PEOPLE'S REP., 31, 43, 44, 45, 46, 47, 48, 49, 50, 51

CONGO, 32

CUBA, 32, 43, 45, 46, 48, 49, 50, 51

DENMARK, 32

ENGLAND, 33

ESWATINI (Swaziland), 48

FRANCE, 33, 45, 47, 48, 51, 52

GERMANY, FED. REP., 34, 48

GREECE, 46

GUAM, 34, 50

GUINEA (French West Africa), 33

HAWAII, 52

INDIA, 34, 48

IRAN, 35, 44, 45

IRELAND (Eire), 35

ITALY, 35

JAPAN, 35, 44, 45, 51

KOREA, DEM. PEOPLE'S REP., 43, 46, 47

KOREA, REP., 36

KUWAIT, 36, 52

MADAGASCAR, 36, 47, 48, 49, 51

MALI (French West Africa), 36, 44, 49, 51

MEXICO, 44

MYANMAR (Burma), 36

NETHERLANDS, 36

NEW ZEALAND, 36, 43, 44, 49, 52

NIGERIA, 49

NORTHERN MARIANAS, COMMONWEALTH, 47, 49

NORWAY, 36

OMAN, 44

PAPUA NEW GUINEA - NEW GUINEA TERR., 36

PAPUA NEW GUINEA - PAPUA TERR., 36

PERU, 37

PHILIPPINES, 37, 45, 47, 51

ROMANIA, 37, 45

RUSSIAN FED. - EUROPEAN (European R.S.F.S.R.), 37

SAO TOME, 37, 46, 50

SAUDI ARABIA, 47, 50, 51, 52

SINGAPORE, 44, 45, 46, 49

SOMALIA, FED. REP. OF - BRITISH (British Somaliland), 37

SPAIN, 37

SRI LANKA (Ceylon), 38, 50

SUDAN (Anglo Egyptian Sudan), 38

SWAZILAND, 48

TAIWAN (China), 38, 44, 46, 47

TANZANIA - ZANZIBAR, 39

THAILAND, 38, 51

TURKEY, 38, 47, 49

UNITED ARAB EMIRATES, 38, 48

UNITED KINGDOM, 47, 49

UNITED STATES OF AMERICA, 11, 38, 40, 43, 45, 50, 51, 52

UZBEKISTAN (Uzbek S.S.R.), 38

VANUATU (New Hebrides), 38

VATICAN CITY, 39, 47

VIETNAM, 39, 48

ZAMBIA (Northern Rhodesia), 39

DRM, 15, 18, 19, 25, 26, 30, 31, 34

DX, 5, 6, 8, 9, 10, 11, 15, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 53

DXer, 8

Event

DXpedition, 9

Flashsheet, 5, 10

Mode

AM, 7, 8, 9, 34, 41, 49

FM, 7, 8, 9, 18, 40, 42
SSB, 9
USB, 37, 40, 41, 50
Musings, 6, 10
Organization
EDXC, 6
HFCC, 31, 36
NASWA, 10, 11
QSL, 4, 30, 31, 33, 35, 36, 37, 53
Receiver

Drake, 42, 53
Hallicrafters, 53
Hammarlund, 53
Perseus, 42
SDR, 5, 31, 39, 42
Station type
Clandestine, 41
Pirate, 40, 41
Relay, 41, 51

Executive Director: Richard A. D'Angelo, 2216 Burkey Dr., Wyomissing, PA 19610

Publisher / Business Manager: Richard Cuff, P. O. Box 3292, Allentown, PA 18106

Executive Council: Jerry Berg, Ralph Brandi, Richard Cuff, Rich D'Angelo, John Figliozi

EDITORIAL STAFF

NASWA Notes: Richard A. D'Angelo, 2216 Burkey Dr., Wyomissing, PA 19610

Musings: Jerry Lineback, 4422 Sierra del Sol, Paradise, CA 95969-8116

Listening Review: Alan Roe, 33 Atbara Rd., Teddington, TW11 9PA United Kingdom

Shortwave Center: John Figliozi, 45 Algonquin Rd., Clifton Park, NY 12065

Adrian Peterson's Diary: Dr. Adrian M. Peterson, Box 29235, Indianapolis, IN 46229

NASWA Awards: Gary R. Neal, P.O. Box 1, Cockeysville, MD 21030-0001

Listener's Notebook: Richard A. D'Angelo, 2216 Burkey Dr., Wyomissing, PA 19610

Pirate Radio Report: George Zeller, 3492 W. 123rd St., Cleveland, OH 44111

QSL Report: Sam Barto, 78 Blakeman Rd., Thomaston, CT 06787

Scoreboard: Gary R. Neal, P.O. Box 1, Cockeysville, MD 21030-0001

International Broadcasting: Dr. Kim Andrew Elliott, 5001 25th Street North, Arlington, VA 22207

Loggings: Dave Turnick, 372 Spohn Rd., Sinking Spring, PA 19608

NASWA Flashsheet: Mark Taylor, 1114 Ellen Ave., Madison, WI 53716

Desktop Publishing/Graphics: Richard Murphy, 1342 Oak Path, San Antonio, TX 78258-1935

JOURNAL ISSN: 0160-1989

MEMBERSHIP FEES:

United States (First Class Mail)	\$32.00
Canada (First Class Mail)	\$39.00
Overseas (U. S. Air Mail)	\$54.00
e-Journal	\$15.00

All remittances must be in U.S. funds and may be mailed to:

NASWA
P. O. Box 3292
Allentown, PA 18106
U.S.A.



Paypal is also accepted. Contact hq@naswa.net.