SHORTWAVE BULLETIN

Nummer: 1421, 5 december 1999. Deadline nästa nr: 17/12 1999 (fax & E-mail 19/12 kl. 0900 SNT)

Återigen står HCDX - Hard Core DX för stora delar av informationen i detta nummer. Några DX-are har i där tagit upp en diskussion om EDXC:s Country List. Jag tycker det kunde vara rätt intressant för SWB:s medlemmar att få ta del av vad en mailinglista kan användas till - nämligen hur man på ett mycket enkelt sätt kan framföra sina åsikter för ett stort antal DX-are och omgående få ta del av de andras synpunkter. Allt för att främja vår hobby.

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Elektronisk SWB.

SWB på nätet hittar du på dessa sajter: TN:s http://home.sverige.net/thomas.nilsson/swb.htm och AHK:s http://www.algonet.se/~ahk/swbhome.html

Medlemsavgiften betald före 31/1 år 2000!

Bengt Dalhammar meddelar: Vad gäller medlemsavgiften för kommande år tycker jag att vi fortsätter med en gemensam avgift också nästa år oavsett om bullen kommer i pappersform eller elektroniskt. Kostnaden för pappersbullen är lätt att räkna ut medan det är svårare att uppskatta kostnaden för den elektroniska varianten så vi får betrakta också nästa år som ett försöksår i detta avseende. Oavsett distributionsform är bullen med all sin information för mottagaren väl värd kr 220:-, som jag föreslår som avgift för kommande år. Utrikes medlemmar får lägga till kr 30:- för postens avgifter.
Detta innebär: **Medlemmar Sverige: 220:-**
Medlemmar utrikes: 250:-
Inbetalning till postgiro nr 68 61 36-3 före 31/1 2000.

Utgivning år 2000

Inför det nya året upprepas här medlemmarnas önskemål hur man vill erhålla bulletinen framledes.
Per post: OA, CB, TK, RA, KO, CS, GW, BEFF, LB, LS, KN. Papperskopia går dessutom till Jari Lehtinen och Dario Monferini.
Enbart PDF-fil: LES, OVE, LRH, JE, LR, TL, RW, AHK, TN, HEP, HK.
Ej svarat: BM**,** SA, BD, JOE, THE, BE, RF, IS, TBV, RÅ, WM, IE, DO, HB, AB, LW, HEJ, SHN.
För mig som redfaktör är det alltså en fördel att slippa skriva ut och kuvertera. Från och med 1/1 2000 kommer alltså bullen inte att skickas som papperskopia till de som vill ha den i pdf-format.
Var vänlig hör av om ngt av ovanstående är fel uppfattat. För de som ej svarat är det snart dags att få reda på hur ni vill ha er bulletin framledes.

QSL, kommentarer, mm.

Tor-Henrik Ekblom: några strö qsl den senaste tiden: ***VOA Tinian*** 13650 kort, info, 6mån. 20dgr. ***Radio St.Helena*** 11092,5 kort, brev 11 mån. 23dgr, ***Radio Stn.WTJC*** 9370 kort,info 13dgr. Alltid något.
Christer Brunström: Mycket arbete medför att tiden för DX-hobbyn är något begränsad för närvarande. Ett QSL sedan sist är ***AWR Meyerton 12130*** med kort, vimpel, mm.
Jan Edh: Äntligen såg förutsättningarna lite bättre ut, och jag och Ronny Forslund gjorde gemensam sak ut till Fredriksfors på lördagskvällen 27/11. Eftersom vädrets makter chockat med uppåt +10 på eftermiddagen, var det lätt att få angenäm lyssningstemperatur i stugan. Det var dessutom angenämnt tyst på banden när det gällde störningar. För säkerhets skull provade vi fjolårets sista glögg också. Tyvärr blev det trots allt väldigt tyst i övrigt också... Kortvågen gav inte ett smack. NBC Papua 4890 gick hyggligt, inget annat från Papua, inget från Indonesien ? inte ens afrikanerna gick något vidare. Och inget av värde mot LA-på natten på tropikbanden. På MV gick Harbour Light redan vid 22 SNT, kanadick på 930 halvtimmen senare och även VOCM 590 började höras. Eftersom det inte blev något mer beslöt vi oss för att vila en stund och började om vid 3-tiden. NA på många frekvenser, framför allt på högre frekvenser. Men det visade sig snart att det bara var mycket vanligt och starkt östkustkoncentrerat. Dessutom stört (även på östkustantennen) av Venezuelaner, och oftas klena styrkor på NA-signalerna. Morgon/förmiddag fanns inget som helst transatlantiskt, däremot gick en del britter. Och planer om att fortsätta på söndagsnatten gav vi sedan upp när vi också kunde läsa om att det blivit stört igen...
2/12: ännu en misslyckad natt. Trots att A-index var nere i 2 hördes i princip inget. "Inget NA, Inget Västindien. Inget LA". Inget tidigt kväll. Inget mitt i natten. Inget på morgonen. Däremot enorma Brasilien-styrkor redan tidigt, men det blev inte mycket där heller.
En enorm Brasilienöppning 1.12 vid 2200 - 2215. Följande frekvenser hörbara, flera med mycket stark signal: 3205, 3245, 3325, 3365, 4765, 4775, 4785, 4805, 4825, 4845, 4875, 4895, 4915, 4935, 4945, 4955, 4965, 4975, 4985, 5015, 5035, 5055. Också 25 mb-brassarna var starka, däremot sämre på 31- och 49-mb. Mycket magert i övrigt, så när som på starka 60-mb-kineser.
Tore Larsson: QSL från ***VoA, Tinian 13650*** kort mm. efter rapport från testsändningarna i januari. Så LB, än är inte hoppet ute!
Björn Fransson: Nu vet jag vad QSL är, för det har ju faktiskt kommit ett och annat sedan senast jag skrev: ***Amateur Radio Mirror International*** via Sentech, South Africa-15250. Special-QSL and letter, v/s: Hans Van den Groenendaal. 3 w. ***WTJC,*** Newport, N.C., USA-9370. Crd, program guide, v/s: P Robinson. 2 w. ***Galei Zahal***, Israel-6898. Crd. 1 m. ***Imagination Radio*** via Skelton, UK-6010. Crd with personal note: "Bjorn, your letter was a delight to read, thank you so much", Info about Stafford Broadcasting Society. V/s: Rob Leighton. 1 m. ***WWBS***, Macon, Georgia, USA-11900. Nice certificate,

pers ltr and apologize for the delay of 1 years. Heard: Dec. 19th 1998 = **SM1?** V/s: Jo Ann Josey. ***CHNX***, Halifax, N S, Canada-6130 (40 w output!). Nice computer made ltr, made especially for the Nordx competition 1999. Ltr, v/s: Scott Snailham. Also sent a cassette with the program I heard! A real DX-answer! 3 w. ***Radio Middle East***, Cyprus pirate via IRRS, Italy-3985. Stencil, v/s: Nathan Morley in a Napa Radio envelope. He is also v/s on that station. Address: P O Box 30582, Ayia Napa, Cyprus. E-mail: nradio@cytanet.com.cy 1,5 m. ***Voice of the People of Kurdistan Radio***, clandestine-6985. Letter in German from P.U.K, Postfach 210231, 10502 Berlin, Germany. http://www.puk.org , 2 m. Kortvågen gav en del natten 26-27/11 nere vid Ygne, vilket, det syns i tipsspalten.
Leif Råhäll: För första gången i höst kunde R Tampa höras på 6055 // 9595. Betr. Pakistan på 5045 så ligger sändaren i Islamabad. (se nr: 1393). Troligen Itanagar som hörs på 4790 tidigt på em. (Har hörts där tidigare). Inga spår här nere av Vanuatu 4960, Solomon Isl. 5020 på förmiddagen ännu , kommer kanske senare. Har hört något på 5020, börjar strax innan 19.00, hörs i ca 20 min och fadar sen bort. Kan vara Solomon Islands som jag hört där vid denna tidpunkt 1997. Idag är det lördagen den 4.12, dagen efter ovädret med vindbyar mellan 35-45 m/s. Stor förödelse på hus, tomtmark och antennanläggningar. Klarade mig själv bra med mindre skador. Min radiokollega här nere blev av med sin mast och alla antenner (beam, rot. dipol samt delta-loop och 80 m dipol). Masten var 17 m hög. Har varit där hela dagen och röjt. Har varit på ett annat ställe där 2 st 20 m tallar fallit. Så nog händer det saker här nere. Det har nog varit liknande på annat håll. Det här var det värsta jag varit med om. Just nu passerar försvarets helikopter som håller på att med vattenbegjutning av högspänningsisolatorer som blivit saltbemängda, arbetet har pågått hela dagen.
Bengt Dalhammar: Någon fm har det också funnits spår av någonting på 4960, i övrigt har det varit minst sagt mediokert.

LOGGEN - ALL TIMES ARE UTC

3214.8	2.12	2227	INS Manado. Marschmusik 2 LRH
3310	1.12	2250	Radio Mossoj Chaski tidigt ute och oväntat bra styrka. Gick starkt fortfarande 0045. Men inget annat Bolivia och väldigt litet Peru i övrigt. JE
3390.0	3.12	1545	IND Gangtok. Indiska sånger 2 LRH
3923	26.11	2045	Radio Samorodinka, Moskva med operhört dålig modulation spelade gamla låtar och pratade om morse. ID-ade också snällt emellanåt. S 2-3 BEFF
3985.8	22.11	1432	INS Surabaya med gamelan mx 3 LRH
4746,5	26.11	2315	R Huanta 2000 sjöng "Hallelulah" med ID-ade inte, så den är väl egentligen OID, likosom LA på 4775, 4790, 4830, 4840, 4855, 4890, 4926, 4940, 4950, och 4975 + en massa annat kul vid denna tid. BEFF
4790.0	3.12	1440	IND Itanagar (T) Mx och tal 2 LRH
4799.9	26.11	2335	R Buenas Nuevas pratade om "articulos", men ID-ade inte heller! S 3. BEFF
4870	26.11	2245	R Dif Catolica Cultural anropade också LV del Upano och formligen dånade in och fick det att tåras lite i ögonen på en gammal HC-vän! S 4 BEFF
4870.02	9.11	1445	CLN Ekala , com.serv.med nat. mx 2 LRH
4890	30.11	1910	Tent NBC med mx. 2-3 Även den 4/12 kl 0810 och framåt c:a 20 min innan bruset tog överhanden helt. TN
4902.0	22.11	2155	CLN Ekala med musl. mx 2 LRH
4950	26.11	2235	Radio Madre do Dios, Peru mycket fint en stund. BF
4960	8.11	1725	OID indier, men sannolikt AIR/Ranchi, hördes bra, men oftast ligger en CW-are där och stör. S 3 BEFF
4960	4.11	0810	Svag station precis i/över bruset. Kan vara Vanuatu som redan loggats flera gånger i Tyskland och Spanien. Var i varje fall ej Vietnam av språket att döma. Denna morgon hördes även japanerna en stund på 3925 och 3945, dock svagt. TN
5020	30.11	1900	Tent SIBS, mycket svag. Fade out efter c.a 15 min. Niger är off på kvällarna sedan flera dagar tillbaka. Inget spår ännu på fm. TN
6055.0	24.11	0915	JPN Tampa ffg i höst// 9595 2-3 LRH
6184,97	2.12	0745	Radio Educacion med någon form av nyhetskommentar sedan Vatikanen stängt. 3-4 + sedvanligt brus. BD
6200	27.11	0830	Good Music Radio, UK - pirat, men kan väl få vara med för att den spelade just - good music!? S 3-4 BEFF
7385	27.11	0800	WMRI på ny frekvens med engelskt program. 2 CB
12689.5	26.11	2000	AFRTS, Key West, FL gick fint på USB med program för "New Dimensions Radio" och en massa meddelanden. S 3-4 BEFF
15476	26.11	2010	R. Nac. Arcangel antydde att det skulle bli en trevlig lyssnarnatt mot LA! Tangos med S 3-4 BEFF

Stationsnyheter:

BOLIVIA.
R. Victoria is new or reactivated on 7053, heard Nov 21 at 2050 UT, announcing twice it is on ``41 MHz" SW from Villa Abecia. This is near Camargo in southern Bolivia (Rogildo Fontenelle Aragao, Cochabamba, member of DX Clube Paulista) [via HCDX]
PAPUA
Caught a news broadcast from Port Moresby this a.m. that stated **R. East New Britain 3385 is down and off the air** due to a 6.2 earth quake. Had been up running for a couple of weeks after repairs but down once again. No word in the news broadcast when they expect to be back up. 4890 very good this a.m. for the first time in several weeks.
["Robert Montgomery" <RMonty3@worldnet.att.net via HCDX>]
PUERTO RICO
6458.5 (LSB) U.S. Armed Forces Radio 0310 A relay of the CBS Radio Sports coverage of the Monday Night NFL Greenbay Packers-San Francisco 49er's game was being played. Commercial on 1/4 hour for Training Center, History Piece on US Transcontinental railroad at 0327. Brief news repot @ 0330 and back to game. Strong utility station interference. SINPO=22333.(Oldenburg 11/30)

["Jon & Valerie Oldenburg" jonandvalerieoldenburg@worldnet.att.net via HCDX]

SOLOMON ISLANDS
5020 SIBC Honiara (presumed), November 26, 18.59-19.15, soft pop music, O=1-2, fade out at around 19.15. ORTN Niamey on 5020 seems to be absent since several days. This is a great chance for all European Pacific enthusiats to try reception of Solomon Island BC signing on at around 19.00 UTC. Unfortunately the signal was too weak for a clear ID.
[Michael Schnitzer, mschnitzer@cc-online.de via HCDX]
SURINAM
4990.9, Radio Apintie; Paramaribo, Nov. 29, 0345-0450. First time I heard this station, really happy with it. Almost no talk, but clear ID heard at 0419. Non-stop soft popmusic (R Kelly, Mister Mister, The Jacksons, etc.). Also heard a song by Dutch singer Marianne Weber. 23332 ["Mark Veldhuis" <dx@mark-veldhuis.demon.nl> via HCDX]
PERU
6522.04, R Ondas del Rio Maranon, Aramango, La Libertad, 0054 Nov 30, reactivated here with typical Andean programming of huaynos, comunicados, ads, and numerous IDs to informal signoff at 0107. Plagued by utes and fishing boat traffic, but pretty good signal. Thanks to Henrik Klemetz for confirming my transcription of the ID. (Jay Novello, NC, Nov 30 via Hauser Shortwave DX Report, HCDX) Jay Novello has an audioclip available at http://havana.iwsp.com/radio/samples/6522.rm.
UNID
12140, University of the South Pacific in Fiji?? this morning (= 30/11), I could receive once again an extremely poor signal on 12140 kHz. From 6.57 to 7.00 UTC I listened to a piece of music, which I would call "typically South Pacific style". It's a kind of music, which can be heard also via NBC Port Moresby or via SIBC Honiara. At 7.00 came a time signal with 6 peeps followed by a female voice (news?) until 7.10 UTC. The language seemed to be English. After that time I unfortunately had to go in my office. I know well that these observations as well as my first 12140-notice from last weekend are not coincident with the published broadcast schedule of the University of the South Pacific in Fiji. However what else should it be? Any ideas? I especially would like to ask our friends from Australia and New Zealand. Did you observe that station recently? Who does know more? I hope that the mystery on 12140 will be solved soon. [Michael Schnitzer, mschnitzer@cc-online.de via HCDX]

Övriga radionyheter:

132nd DXpedition to Lemmenjoki

The 132nd DXpedition to Lemmenjoki in Finland is now over. From November 15th to 22nd 1999, Mika Makelainen and Jim Solatie scanned the AM band, using the ultimate DXing hardware in our traditional location, above the Arctic Circle.
The DXpedition was relatively successful despite the rather high solar activity. The most interesting part was listening to Asian stations in the afternoons. Several stations, which have never before been logged in Finland nor elsewhere in Europe, were identified. Aside from the "normal" catch, our log also contains some interesting split frequencies, new unlisted transmitters and some unidentified stations.
I have posted the DXpedition report at: http://www.makelainen.com/dx/lem132.htm. Naturally, you may also access it through my website "Freeze! Dxing Arctic Style" at: http://www.makelainen.com/dx/dxpedit.htm.
By the time you are reading this, another crew is already busy in Lemmenjoki. Their comprehensive logs will hardly be published on the net. Therefore I hope that this report will offer DXers around the world a peek into Finnish DXing and the DXpeditions of the season. I hope you enjoy the report and find the log useful. I also hope you will return to the site a few months from now, because we have a huge pile of unchecked recordings and it is safe to say that dozens of rare stations will be added to the log in the weeks and months ahead.
f you have any information on the stations which we were unable to identify, both Jim and I would appreciate your comments. Of course, all other comments are welcome as well.
["Mika Mäkeldinen" <mika@makelainen.com>]

One-week dx-pedition to northern Denmark

Just returned from a one-week DX-pedition to northern Denmark. Together with Uwe Volk we stayed a week in Wilhelm Herbst's house. Despite 17 antennas ranging from 80 to 330 meters 12 stations only from North America were heard on MW. Two years ago we heard 12 North Americans on 1390 alone.... So we had to look for other targets. And we found some interesting AIR local programmes: AIR Shillong in English with half an hour of easy-to-report western pop music from 1400-1430 on 4790. AIR Gangtok, also in English with pop-music on 3390 from 1430-1500 UTC. AIR Kohima 4850, English programming, pop music, from 1400-1430 UTC.
["Martin Elbe" <elbe@wolfsburg.de> via HCDX]

EDXC Country list

How does it take years to put a simple list into net? It's the money, isn't it? Are these lists copyrighted? Can I publish my own DX-Country List, created and updated by me (and is 100 % equivalent of Finnish DX Association's country list) in the net? I also find it hard to understand that the EDXC is acting so slow and nobody seems to be interested to use the advantages of internet for distribution. Postal rates have got so expensive within the last couple of years, especially for publications. So the additional dollar that may be made by the EDXC will hardly be a reason - maybe Risto Vahakainu can put some light on it?
[Willi Passmann <dx@passmann.e.ruhr.de>]

Thanks for both public and private messages concerning the EDXC Country List and the lists in general. For those who are with in the edxc list but not in the hard-core-dx -list I'll just briefly say that a discussion on country lists and their availability has popped up, and quite a few people have requested to have the lists publicly available in the net.
Concerning the EDXC List I'll try to check a few details, and I hope to be back with this later this week. Referring to what Ralph Brandi wrote about the NASWA list, I'll just like to comment that the EDXC List (and I guess most or maybe all European lists) uses the principle of dividing to old and new countries. This does give benefit to older collectors, but also keeps on real life. While Ralph is proud of the NASWA way of doing this, I would myself find it very strange to start the hobby now and to be able to pick up not-anymore-existing countries like East Germany.
Another problem I find with the NASWA list is that it is only for shortwave. The EDXC List lists all countries and DX-countries in the world not depending on their current or earlier activity, and it is thus useful also for medium wave or FM Dxers etc. And it is not

necessary to update the list when new "radio activity" is noted in some country. We just have to follow with the political changes (which of course are very problematic in some cases).
The EDXC List bases on the work done by the landlist committee of the Finnish DX Association (founded in 1964) and the current EDXC Landlist Comittee chairman Olle Alm.
[Risto Vahakainu, EDXC <vahakain@cc.helsinki.fi>]

On Thu, 25 Nov 1999, Mauno Ritola wrote:>For easier comparison it would be good if every club used the same list throughout the world. After all we are more and more international community nowadays.>
The other problem in these comparisons is the QTH problem. Different parts of the world are different QTHs and of course it is not sensible to compare with someone who travels everywhere and reports locally or nearly locally. But some DXers also live during their hobby life in different countries etc. In Finland this is pretty easy. We count the stations that have been received in Finland, and many DXers travel to DXpeditions to west Finland for Brits, North Finland from North Americans and East Finland for Asian stations. But this rule doesn't work in all countries. How would you define this?
> I personally would prefer the NASWA principle of old radio countries to be used, but it seems that the main principles of EDXC list can't even be discussed about. Anyway, I'd like to know if I am the only one in Europé with this opinion. In my mind any small detail that would keep a newcomer in the hobby would be good. There are already enough things which > discourage newcomes to continue in the hobby (diminishing number of stations on SW, MW etc.). Old-timers have enough QSLs from stations not existing any more, and that's something that can't be changed. But counting DX countries is a different matter.>
In general it is a worldwide problem to get youngsters to this hobby. I don't think this making it a bit easier to hunt countries would really mean much. Many countries have in practice disappeared, because they have left shortwave and/or medium wave. And like I said I would feel strange to be able to QSL old countries and "countries". If we would pick up the
NASWA system, we would then also need to modify the system to work on medium waves and maybe FM, too, which would need a lot of history work. This is the reason why I think a complete country list basing on world politics and geography is better than a list where only radioactive countries are listed.
>And anyway at least in Finland one can count two radio countries for Vietnam, if one has heard a station from North Vietnam before unification and now hears a station from ex-South Vietnam area. That's because they were independent states. How is that elsewhere and acc. to EDXC list? Couldn't that detail be widened to DX "countries", too? > 73, Mauno
This problem bases on the idea of whether countries have united or one country has merged another to it. I discussed this Vietnam case about 10 years ago with the FDXA landlist committee, and those wise men told me that one criteria of united countries is that the new country has a new name. The basic example of this case is the unification of Tanganika and Zanzibar (in the 60's) to a country called Tanzania. And according to the committee North Vietnam, South Vietnam and Vietnam are different names. But when east Timor was merged to Indonesia, it just meant that the country Indonesia grew a bit bigger. Working in a landlist committee is interesting; you sometimes have to decide on world politics! (I have never been a member). Anyway, counting radio countries can still be ruled, but counting radio stations using clear principles is in practice impossible.
[Risto Vahakainu <vahakain@cc.helsinki.fi>]

Risto, You brought up a very important point of DX-ing in Finland. You said that it is not sensible to compare with someone who travels everywhere and reports locally or nearly locally. That is exactly what you are doing over there. The distance between Hanko and Utsjoki is about 1100 kilometers. About the same distance than from my location 3 kilometers west of Geneva (Switzerland) airport in France to Manchester, England or Budapest, Hungary or Hamburg, Germany or Madrid, Spain or Palermo, Italy. You really cannot compare your achievements with DX-ers from other countries, when you do not do your DX-ing from a single location as most of us in Central Europe do (Fellow DX-ers please correct me if I am wrong). If we travel the distances you do in Finland, we are very soon outside the borders of the country where we live. What about people living in USA? They can travel quite a bit further than you can travel within Finnish borders, but still their travelling cannot be called "travelling everywhere", because USA is considered as one country. It is not only the newcomers which should continue in the hobby. It is also with us "old-timers" for whom it is not always so evident, why we should stay with the hobby. I think, I am a "special case". I started DX-ing back in 1959 in Finland. I went through the "Finnish Competition" at the time. My best rankings among Finnish speaking DX-ers were at one time 10th on short waves, 2nd on medium waves, 2nd on utilities and 1st on TV. However I did not stay long on that level for several reasons (DX-ing from a single location, using my iron bed as my best antenna, my studies, my work, etc.).
I left Finland in 1969 to work first in USA for a year and half. After that I moved to Switzerland and in 1987 to France. As the "Finnish rules" for counting stations and countries limits listening only inside Finland's borders, my achievements could not be listed in the Finnish DX publication to compare the results with listeners in Finland. Therefore, I have been like an orphan for the last 30 years.
As stubborn as I am, I am still a member of the same Finnish DX-club I started with in 1959. Fortunately there are other DX-clubs where competing with other members is not the most important part of the hobby and your achievements from different countries can be published without you feeling guilty on imposing your ideas.
[Esko Ahlroth, ahlrothe@who.ch]

ULF range below 22 kHz (Rec.radio.shortwave)

There's a webpage which covers the ULF range below 22 kHz, down to a few Hz. Really interesting stuff. What surpises me is that although this guy's in Europe, he is not picking up 60 Hz from US piower systems, but is getting the 50 Hz used in Europe. Well worth a look to show there's more to Dxing than logging broadcast stations. See: http://space.tin.it/scienza/rromero/
[radiomatt@aol.com (Radiomatt)]

4 phased McKay Dymek DA100E active antennas (rec.radio.shortwave)

I just completed a MW phased array consisting of 4 McKay Dymek DA100E active antennas at the corners of an acre, combined in 3 JPS ANC-4's. The plan was to be able to null out two stations and hear a third on the same frequency, and it seems to work.
The procedure is: 1. Null out the strongest station A from the NW and NE pair; 2. Null out station A also from the SW and SE pair; - so far 2 of the ANC-4's have been used - 3. With the 3rd ANC-4 using these two inputs, null out station B.
The key idea is that you won't lose your progress against station A doing this because station A is absent from both inputs, so you can't put it back accidentally. You're left with what's under stations A and B. (If the nulls are in an awkward arrangement, I suppose you're left with nothing at all.) A real audio clip of what I managed to do at 10am this morning, pulling WXYT 1270 Detroit (which carries Imus,

the point of all this) from under the strong local WUCO 1270 Marysville OH and WILE 1270 Cambridge OH: http://home.att.net/~rhhardin2/radio1270.ra (44k). It starts with WXYT on 4 elements, and then listens to WUCO on the SW-SE pair alone, and then listens to only the SW antenna for WUCO, which covers everybody.

secs: 0 - 20 WXYT station identification (4 element phased array active, nulls out WILE)
secs: 20 - 30 WILE (2 elements disabled, 2 active, each pair nulls out WUCO; this is one of them)
secs: 30 - 40 WUCO (3 elements disabled, 1 active, the raw input, what you hear normally)

It sounds like I'm changing the frequency, but it's not! Actually you can hear WXYT a little under WILE. It would have been nice if all 3 stations had made an ID in sequence but they didn't.
In theory you can null two stations with only 3 antennas, but there's no organized procedure to do it by hand. You always lose the progress made against station A when you make progress against station B, unless you're a computer doing it.
Three antennas is better than two though, because you can produce really deep single nulls, using the third antenna with low gain as a "bandspread" on a null made with the first two.
The DA100E / ANC4 phased array is far superior to even the big Kiwa loop for MW listening. It also costs a lot more. On the other hand you can start small. Unfortunately the ANC-4 is no longer made, and the MFJ 1026 seems not to work on MW without modification.
I actually was going to use this on WPHT 1210 Philly to hear Imus - it does manage to pull in WPHT pretty much all day, against WDAO 1210 in Dayton being nulled out - but it's not always intelligible, only detectable. This WXYT discovery was a bonus.
Incidentally a phased pair produces nulls in a "V" which can be swept from one end to the other, where a MW loop produces a null on both ends of a straight line broadside to the loop.
A single DA100E and ANC-4 can be combined with the output of the Kiwa loop (co-located with it) to make the loop nulls one-sided, using the handedness of the magnetic and electric fields; thus you can peak East and null West. This actually works, except that the bandwidths don't match so you can't do it over the whole signal very precisely. It's dangerous because you're likely to realize that with a single DA100E more you can build a real phased array, and then you're going down the slippery slope. The McKay Dymek DA100E's come with 50' of coax; I added up to 150' more each of them, what with getting them down to the basement and then out the defunct heat pump (fl. 1977) hole in the wall. These are buried (stick shovel in ground, pull to side, slip in 6" more of coax, and repeat, being careful not to cut coax). They just stand in their corners of the lot, two in trees about 6' up, and two on 10' copper ground rods pounded in 3 feet and disguised with wren houses. The steering is done in the house with the ANC-4's, which do phase shifts and gain changes on all but one of them. Decaf is the usual beverage, though it takes a lot of it to keep you awake.
The antennas are at the corners of a roughly 120 x 160 feet rectangle, which gives the neighbors and the power lines by the fence a little space. I think people with lots of space use 1/8 to 1/4 wavelength. A closer spacing reduces the signal remaining, but I don't think it bothers the nulls. I use it at 550 kHz without any trouble. Signals are pretty big on MW so the loss of gain doesn't matter much.
A too-big spacing would make the nulls too narrow compared to arrival fluctuations, and you can't null anything. I can't null anything but local noise on SW with my spacing, but it's fine on MW. (Local noise is stable in direction.)
There's an operational constraint incidentally, that you need distinguishable signals in order to proceed to null them one by one. If there's just the usual nighttime mush you get no foothold to get started, even if there were some setting that would improve things. I have to wait until the locals settle out from the sunrise noise before I can get to work nulling them.
[Ron Hardin, rhhardin@mindspring.com]

Ten-Tec RX-320 (rec.radio.shortwave)

I've read many postings and the online reviews about the Ten-Tec RX-320. However, I've not seen comments (positive or negative) about the receiver when used for very demanding DXing (i.e. foreign mediumwave or tough tropical band targets).
Has anyone tried this receiver on a DXpedition? I've experienced what a Dymek DR-333 receiver ("black box" PC-controlled non-DSP rig) can do on the good end of a Beverage, but how about the RX-320? Images all over the place, or...?
The DR-333 does a creditable job, especially in the hands of mediumwave Dxer Nick Hall-Patch of Victoria, BC Canada. He's written some impressive software that causes the DR-333 to mathematically reduce the effects of 10-kHz domestics when scanning for trans-Pacific mediumwave splits. It was a great signal-finding tool during this summer's "1999 Grayland Beach DXpedition" in Washington State. His software ran unattended on a DR-333 and the results of "hits" were displayed on a notebook PC.
I mention the DR-333 because it is perhaps (??) similar in construction and performance to the RX-320, except for the latter's DSP I.F. filtering.
I've owned Drake, JRC, Lowe, ICOM, and AOR communications receivers before, and I'm familiar with what they can accomplish on foreign MW and tropical band DX. The current rig here is a Yaesu FT-920, with upgraded, cascaded crystal filters from International Radio Co. in Oregon USA. It performs admirably and has some unique features for DXing. However, I'm curious if anyone has really *pushed* the RX-320 for DXing, especially with Beverage antennas? I'm getting the itch for the proverbial "backup" receiver, and the little Ten-Tec appears to have a high value-to-price ratio.
I don't expect the RX-320 to dig out every signal that my FT-920 can, but if it hears as well 75% of the time, I'm tempted...
So... please respond if you have tried any down-and-dirty DXing with the RX-320, particularly in a DXpedition situation. Also, if you have experience with Ten-Tec's new Pegasus transceiver, please share your comments; I suspect its receiver is the same as the RX-320.
Come to think of it, I've read that the RX-320 acts as if it has a 1 MHz highpass filter installed. That's probably not too much a problem, as sensitivity is not the issue on MW, even with the weak foreign splits. A receiver's ability to deal with high signal levels and adjacent-channel splatter from domestic channels is more important.
I would think that ultimate rejection and dynamic range are the primary limitations of this receiver's DSP filters. That's the limitation of all the current consumer-grade DSP boxes. The cascaded crystal filters in my modified FT-920 are spec'd at 1.5 to 1 shape factor (same as the RX-320's), and ultimate rejection seems equal to the best of the other receivers I've used. I can't imagine that the RX-320 would come close in the most difficult signal situations. However, I'm curious to try one on the more commonly heard (from West Coast N. Am.) foreign MW stations like 891 Fiji, 1017 Tonga, the Sydney and Melbourne stations, and the Japanese MW powerhouses like JOUB, JOAK, and the Korean on 1566.
Indonesians and Papua New Guinea stations on the tropical bands are also a favorite target for me, and I'd suspect that the RX-320 would have an easier time with these. They are more often "in the clear".

[Guy Atkins, Bonney Lake, WA USA, dxing@hotmail.com, http://surf.to/grayland99 Grayland WA DXpedition logs/photos/audio, http://www.wm7d.net/hamradio/ft920/comments/swlreview.html Review: FT-920 as a SWBC DX Rcvr.]

I don't own an RX-320, but I'm seriously tempted. One of its shortcomings is the reduced sensitivity below 1 MHz, and one of my main interests is longwave reception. Until now that has been a good reason not to buy the RX-320 (besides already having too much stuff in the shack). However, there is an article by Frank Gentges, K0BRA on the ARRL members-only web site <http://www.arrl.org/members-only/> that provides details of a modification to extend the useful reception range of the RX-320 to below 100 kHz. The modification consists of replacing transformer T3 with one that has a better low-frequency response, and supposedly does not have an adverse effect on HF performance. I'd be interested in hearing reports from users of the RX-320 who have made this mod. (Lyle, K0LR http://www.computerpro.com/~lyle]

Understanding ECSS (rec.radio.shortwave)

Exalted carrier, the EC in ECSSB, was a scheme for receiving AM with carrier signals under fading. Using a Q-muliplier, or some other method of boosting a narrow bandwidth, you'd boost the strength of the carrier in relation to the sidebands (since you'd be peaking the carrier and attenuating the sidebands to a certain extent, the Q-multiplier having a sharp peak but lousy skirt selectivity), so the carrier would be strong enough so no distortion occurred.

ECSSB seems to commonly mean using the BFO to provide the carrier when the signal's carrier is too weak. I'm not sure when that scheme was commonplace. But once receivers intended for SSB were common, you'd see it from another angle. You'd have to receive with the BFO on because there was no detector or filter for receiving regular AM. The SSB filter would of course only allow one sideband to pass. But it would also knock down the AM signal's carrier, since it would be on the slope of the filter. The result would be an SSB signal, which would then be detected with a product detector and BFO like any other SSB signal. In effect, you were converting the AM signal to SSB in the receiver rather than at the transmitter. With no carrier, in effect, you didn't have to worry about having the BFO in exactly the right place, issues of off-pitch reception aside.

So the real key is tuning the signal so the carrier and the extra sideband drop off the selectivity curve. Of course, the above was used to receive AM voice signals. Music is another issue, since a mistuned BFO will create mistuned music. But the same applies to music being sent on an SSB transmitter, which may be why there's talk of using SSB with reduced carrier, so there is a carrier to sync to.

One important reason for sync'ing, beyond a beat note with the incoming carrier or mistuned music, is that if you're listening to a double sideband signal, with or without carrier, if you don't have the locally inserted carrier right in the exact middle between the two sidebands, the two sidebands beat against each other and then what might be considered distortion sets in. (If you have the carrier right in the middle, a 1 KHz tone on the upper sideband will translate to a 1KHz tone in the speaker, and likewise with the lower sideband. But if the carrier is off, say a 100Hz, the 1KHz in the upper sideband will be 1.1KHz at audio, while the tone in the lower sideband will translate to 900KHz at audio, and so the tones will beat against each other.)

This is why back when synchronous detectors were available but too bulky for common use, the common scheme to receive DSB with no carrier was to strip off the extra sideband in the receiver, as I pointed out above, and detect it like an SSB signal.

And as someone pointed out, a synchronous detector can refer to a number of schemes. You can go back to the fifties and see receivers described that had two IF chains, one for voice, and the other only narrow enough for a carrier. The narrow filter boosts the carrier, and then it's fed into a product detector instead of the BFO. You see simpler schemes even today, where the carrier is squared up and used to mix the IF signal to audio, though depending on what you are reading, some will say that's not a synchronous detector. Then there are the schemes that lock the BFO to the incoming signal. That is the basic synchronous detector, and is the best for visualization since except for the circuitry that locks the BFO to the incoming carrier, it's identical to what's used to receiver SSB. Synchronous detectors using phasing are the obvious advancement from that. Phasing was often seen in the early days of SSB, before good filters were available. You don't see it much now, except in shortwave receivers with synchronous detectors. If there's no interference, you can make use of both sidebands coming in. If one sideband is being interfered with, you can switch to only one sideband, though the phasing method is not as good as a filter in rejecting the unwanted sideband.

One scheme you'd see mentioned years ago was to feed the upper sideband and lower sideband channels of the synchronous detector to separate speakers. In effect, a stereo effect. I don't know whether any of the receivers are set up for this (commercial receivers that allow for ISB or independent sideband, would have both channels available), but the scheme uses your brain to reject interference on one channel, which apparently works well. An important thing to remember is that SSB is not inherently narrow band. It's just common, since it's commonly used for voice, which has relatively narrow bandwidth, and if you're eliminating one sideband, msot likely you want to reduce spectrum useage. But if you're listening to a broadcast station, too wide a filter in a receiver will let in the next channel, but too narrow will not reproduce the full signal. However, in all this an important thing might be how good the filter is. If your receiver has a narrow filter for SSB, one consideration might be that it might be a sharper filter, not just narrower. If it does have a sharper skirt, it may be a better choice because it will do a better job of attenuating the carrier and unwanted sideband.

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