SHORTWAVE BULLETIN

Nummer: 1574. 16 oktober 2005. Deadline nästa nr: 28/10 2005 (E mail 30/10 kl. 0900 SNT)

Efter en lång period av brittsommar med höga dagstemperaturer har det nu svängt och blivit kallare. I morse var det – 2 gr. Vi har haft fullkomlig invasion av möss. Tom på motorblocket i min bil har jag plockat 6 st hittills som velat ha urgröpningen till tändsystemet som matförråd!
Varje dag måste fällorna längst i nocken vittjas. Det är ett jäkla jobb med all klättring från balkongen.

Flera bidrag har letat sig hit. Som det verkar har MV i synnerhet varit på gång. Flera har hört NA och en del annat smått och gott. SA hörde troligen Solomon Islands med god styrka sent på em och detta tyder på bra konditioner. Så, ligg på – kanske nåt fint dyker upp.

För den som har slantar till övers – kolla in Icoms nya IC-7800 som täcker 0,03 – 60 mHz.

Keep on ....
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SWB-info

SWB online på HCDX: http://www.hard-core-dx.com/swb
Dateline Bogotá: http://hem.ektv.nu/~ekt035221/Dateline.htm
SWB hot stuff: http://hem.ektv.nu/~ekt035221/ (på denna sajt ligger alltid senaste SWB).
SWB member information: http://www.hard-core-dx.com/swb/member.htm
Jubileumstidskriften: http://hem.ektv.nu/~ekt035221/ (html- + pdf-version).

QSL, kommentarer, mm.

Ronny Forslund: Ett par loggningar från Fredriksfors. Hittills inget uppseendeväckande men jag blir nog kvar någon dag till så man kan ju hoppas. 73/ Ronny Forslund

Jan Edh: så har då även jag fått säsongens första NA i hörlurarna. Men det blev bara en och det blev triviala WWZN. Och nu är väl konditionerna över för den här gången dessutom.
Jag var ute på nytt på torsdagsnatten (6-7/10) och försökte betvinga makterna. Men där Ronny Forslund och Rolf Larsson hört Virgin Islands på 970, där hörde jag Colombia... Det har varit min timing den här perioden.
På kortvågen gick Faro del Caribe äntliigen ”anständigt”. Sent ute för att få grepp om eventuella asiater, men även om några indoneser hördes på KV verkade det inte vara något riktigt ”Ramadandrag”. På MV var några kineser mycket starka, men annars inget speciellt.
13/10: ”värdena” var bra och nu (12-13/10) hördes det äntligen en hel del stationer hos oss i Fredriksfors och när jag var på plats.
Kortvågen blev av förklarliga skäl ganska tunt kollad – det vanliga Peru hördes hyfsat. Däremot hittade jag inget av de Peru-nyheter som Björn Malm larmat om i veckan.
Det var bra fart på NL-stationerna redan före midnatt. Senare på natten har jag aldrig hört Bahamas med sådana styrkor. Och tidig morgon började signalerna dra iväg inåt landet också. Men det känns som jag inte fick ut vad jag borde ha fått. Ringrost och alltför mycket planlöst hoppade mellan frekvenser och antenner är goda orsaker. Men också att det verkade som om konditionerna väldigt snabbt svängde söderut i stället för att fortsätta inåt landet. Vår västkustantenn räckte inte alls till för några signaler.
Ännu efter 08.30 gick Cuba, Venezuela m m starkt på flera frekvenser.
Ett QSL också: **Catholic Radio Network 4960**. Email med bilder. V/s Fr. Zdzislaw Mlak news@rtapng,com.pg

Rolf Wikström: Ett livstecken från Lindesberg. Då ingenting tycks hända i LA numera på kortvågen så blir det lätt att man hoppar över sökandet där och håller till på MV istället som tyvärr heller inte ger något för tillfället. Inte ens BM hör något intressant nuförtiden. Skall väl ändå bidra med de ynkligt få QSL som kommit de senaste månaderna. E-brev från **Radio Virgen de Remedios 9223** och **Radio Chaskis 4910**. Två vykort kom från Radio Constelación (ex. Radio Guanay) 4762.

Christer Brunström: CVC Australien sände ett paket med bumerang, två kepsar, koalabjörn, känguru, video, CD, bok + diverse. Jag hade sänt dem mina kommentarer på en aktuell fråga och detta var tydligen belöningen.

Stig Adolfsson: Ganska lugnt i jonosfären just nu. Hör de vanliga östkuststationerna på MV mest varje morgon. Har jagat indoneser utanför de ordinarie rundradiobanden men jag hör absolut ingenting. Här kommer några tips som jag, i väntan på kommentarer till funderingarna i förra SWB, fortfarande anger med tre decimaler:

Dan Olsson: Dags att redovisa lite av vad jag hört. Tipsen denna gång är från en lyssnarnatt i Saxtorp där jag, Jan Thörnblom, Hans Kronkvist och Roland Åkesson deltog. Konditionerna vara inte alls bra, på mellanvåg gick lite Västindien och Venezuela. På kortvåg var det inte mycket att jubla över.

---------- lite utfyllnad ----------

Rapport från Paraguay:
I förrgår var jag på VM-kval mellan Paraguay och Colombia. Matchen slutade 1-0 till Colombia och andra halvlek var det fullt kaos. Domaren missade att blåsa en straff till Paraguay och då blev publiken helt vansinnig och det regnade in flaskor, mynt och annat skräp in på planen. En colombiansk spelare fick en flaska i huvudet och då avbröt domaren matchen, men efter att militär satts in runt planen så återupptogs den. Paraguay var redan klart för VM innan matchen och så blev ju även Sverige i veckan.
/Jesper Nilsson

LOGGEN - ALL TIMES ARE UTC

2310	12.10	2100	**ABC** bra här liksom på 2485. Däremot påstås Tennant Creek ha upphört på 2325 och ska finnas på 2310 den också. 2325 har definitivt varit ”tom” en tid, men det låter inte som två stationer på 2310. QSA 2-3. JE
2850.023	13.10	1520	**Pyongyang** med högstämd sång. N Korea också på 3320 och 3960 denna dag. 2-3 SA
3291	25.9	0450	**Voice of Guyana** med BBC WS-relä. Hördes natten efter med eget musikprogram. Stark varje natt. RFK
3344.968	2.10	1455	**RRI Ternate** med slutannonsering. Cd 1459. 2 SA
3324.998	2.10	1450	**RRI Palangkaraya**, lugn godnattmusik. Cd 1455. 2 SA
3350	25.9	1945	**RNE Caiari** pratade om Don Quijote. QRK 3. RFK
3935.065	15.10	1445	**Oid** med engelskt prat och halvklassik mx, mycket svag. Hur är det med R Reading Sevice, Levin, är den igång?? SA
4052,5	7.10	0535	**Radio Veritas** kom upp sent om sider, men har nog inte fått riktig fart på sändaren ännu efter haveriet. QSA 2. JE
4605	6.10	2055	**RRI Serui** hördes hyfsat med skön musik. Q3. RFK
4605	6.10	2055	**RRI Serui** bäst av indoneserna och dessutom med den där riktigt härliga musiken de här stationerna kan bjuda på. QSA 3. JE
4750	6.10	2100	**RRI Makassar** ananonserade och så nyheter. Väldigt brum på frekvensen och taskig modulation dessutom. QSA 2-3. JE
4750	12.10	2100	**Quinghai PBS** med västerländsk musik upp till annonsering och tidssignal på heltimmen. Våldsamt oväsen på frekvensen, men inte ett ljud från Makassar nu. QSA 3. JE
4780	27.9	1600	**RTV Djibouti** hyfsat stark. Q2-3 RFK
4790	6.10	2100	**RRI FakFak** brukar ofta strunta i kloockan den här tiden på dygnet och så nu också. Ingen annonsering utan man bara spelade över heltimmen i ungefär tio minuter. QSA 2. JE
4889.95	6.10	2000	**NBC Port Moresby** med nyheter. Q3. RFK
4990	13.10	0615	**Apintie** med QSA 3 och musik. Latinamerikanskt den här gången. JE
5019,879	15.10	1450	**Solomon Islands** (tent). Ovanligt stark med World Service relä. SA *(Hördes fint via telefonen når Stig ringde in tipset. På 5020 på min rx skymtades en bärvåg, men eventuell station var dold i bruset från min PC. /red.)*
5025	8.10	2345	**R Rebelde** pratade om den katolska kyrkan på Kuba. DO
5054,7	7.10	0530	**TIFC Faro del Caribe** tycks ha fått bättre ordning på sändaren nu. QSA 3 och lät hyfsat också. JE
5470	06.10	2015	**Radio Veritas**, Monrovia - jobbigt pratpx 3/2-3 THE
6020	8.10	2320	**R Victoria** med religiös mässa till Q 3. DO
6140A	07.10	0205	**Radio Lider**, Bogotá nyheter massvis 4/3-4 THE
6140	9.10	0455	**R Lider** drog sim E-mailadress och spelade några sköna låtar för DO
6185	13.10	0645	**Radio Educación** med musikprogram. Dålig modulation eller möjligen att det var något annat på frekvensen som förorsakade distad signal i ett ”brum”. QSA 2-3 JE
6269.67	25.9	1315	**Radio Diamond** tysk pirat, spelade Uriah Heep. QRK 3-4. RFK
6311	25.9	1325	**Radio Pandora** med eng., spelade Hollies. Svag och störd. RFK
6612	27.9	1850	**Zimbabwe Bc Corp** på 2x3306 kHz med god styrka. Hördes däremot ej alls på grundfrekvensen. Q3-4. RFK
7125	08.10	0605	**Radiodiff. TV Guinée**,info & mx px 3/2 THE
7875U	24.9	1850	**ABC Perth** troligen via militär reläsändare. Trevligt program och bra styrka. QRK 3-4. RFK
9289.85	25.9	1345	**Radio Starship Int.** med trevligt popprogram över Ulbroka. Kl. 14.00 Radio Sutch. QRK 3. RFK
9525	08.10	0700	**Star Radio**, Monrovia via Ascencion "utvecklingen i Liberia" 4/3 THE
12015	06.10	1600	**AWR/KSDA** Agat, Guam rel. px 3/2 THE
12085	2.10	1000	**Voice of Mongolia** med "Sunday Music Programme". 2-3 CB
17555	07.10	0815	**The West African Dem. Radio CLAN** via Rampisham prat, prat 5/4 THE

Bandscan from BM, Quito, Ecuador

Björn Malm, c/o Susana Garcés de Malm, **tel.: (+ 593 2) 2598 470**
Avenida la Prensa 4408 y Vaca, Quito, Ecuador. **email: bjornmalm2003@yahoo.com**
Rx: JRC-535, Loewe HF-150, Sangean ATS-808 Antenn: 12 m lw Ö/V, 24 m lw N/S + Lw Magnetic Balun + MFJ1025 phaser

The following stations have been uploaded during the last 14 days at http://www.malm-ecuador.com

4299.68 unID Perú "Radio..... Internacional" (?) 5/10 2005. New Perúvian station? I listened this evening 2345 to close down 0110 UTC to nonstop Perúvian music of good sound quality just interrupted twice by short IDs with low modulated microphone: "Transmite Radio.....Internacional(?)".

Bjoern Malm`s Peruvian on 4299.68 at 0110 has been identified as Radio Bella (tentative name), from Tingo Maria, apparently a new station on SW, per Anfredo Canyote in Peru, and Arnaldo Slaen on the condig list. BM heard it later from 1026, but only with music. 73, (Glenn Hauser via DXLD)

14/10: 4965.82 unID Perú, this Friday morning at 1100 UTC I made a new recording of the stations ID. A never-ending-story but very interesting so please listen to the clip and tell me your opinion. Daniel Camporini (Argentina) has sent an e-mail to a friend that is working at Radio Nacional del Perú in Lima. "Nacional (+ name QTH?), cambios en ..... los programas y medios(?) ..... sólo una radio todos los lugares. En las noches de ... a 7:30 Radio ... (inter-?)Nacional ..... con la conbertura (inter-?)nacional ..... local .....".

15/10: 4965.82 Radio Santa Ana (Dpto) Cusco (Perú. New station transmitting on SW 4965 and FM 93.3. I have the stations telephone number and hopefully I can get some more information. Is located in the department of "Cusco" but I can not say for sure that the QTH also is the town of Cusco. Said they are relaying Radio Nacional del Perú Monday to Friday.

5678.00 R. Ilucán, Cutervo (Perú) reactivated on shortwave after being off air at least one year. The last 10 days I 2-3 times have noted a strong AM carrier on 5678 kHz without audio, that´s what I thougth. This evening I heard "something" deep under and compared with the stations 3rd MW harmonic on 4260.40 kHz and the audio was the same but hearing 1 word evrty 5 minutes is not a very great pleasure.

5999.266 Voz de Upano reactivated Lago Agrio, (Ecuador)

Saludos Cordiales desde "La Mitad del Mundo"! (When using my information give credit to: Bjorn Malm, Quito, Ecuador, SWB América Latina)

Stationsnyheter

AUSTRALIA: From the **ABC** website: The ABC would like to advice that it is in the process of upgrading its Alice Springs, Katherine and Tennant Creek shortwave Local Radio services. this work is being undertaken to provide greater reliability of these services. Each service will be required to be switched off for approximately four to six weeks while replacement transmitters are installed. The Tennant Creek transmitter will be the first to be upgraded and will be turned off on Monday 10 October.
http://www.abc.net.au/reception/news/051006_shortwave_radio_services.htm . I heard Alice Springs for the first time on 8 Oct. from 1010 UTC on 2310 kHz with a fairly decent signal. (Dan Srebnick - Aberdeen, NJ – USA via HCDX)

GUYANA: Two radio services from Guyanese public broadcaster National Communications Network (NCN) are now available streamed live online from the Homeview Guyana web site at www.homeviewguyana.com.
Online listening of Voice of Guyana and Hot FM requires a subscription of 6 US dollars a month, however it's not clear if that is for both stations or just one. A free 10-minute "sampler" of either stream is offered on provision of an e-mail address (which they assure will not be passed on to a third party). I went for this and after a 30-second wait received a good-quality 8-minute feed of Voice of Guyana at 32 Kbps mono, with no buffering or other interruptions.
The web site is in English and also includes a programme schedule, a history of NCN and its forerunners, and full contact details.
In the past week Voice of Guyana has been observed most days commencing their own programming at a time varying between 0805 and 0830 UTC, following on from the overnight relay of BBC World Service. This was monitored with fair to poor reception on 3291.2 kHz via a DX Tuners.Com receiver situated near Caracas, Venezuela.
In a Voice of Guyana broadcast monitored on Sunday 2 October the announcer mentioned that by the following Sunday they would "probably" be broadcasting from new studios in another part of town, rather than "the old broadcasting house on High Street". The history section of the web site alludes to this, stating that there are plans underway to have NCN's radio and TV services in the same building. Voice of Guyana has no connection with the UK-based web radio Voice of Guyana International.
(Regards, Dave Kernick via HCDX)

INDONESIA. As I write at 1430 UT RRI Bukkittinggi is coming through fine here on 3231.9 kHz. Best of the three Indos I can hear on 90 m.b. Has this been off the air for a while? Though I admit that I have been not very active in the past 9 months, I did check from time to time and can't remember hearing 3231.9 until 1st October.
By the way RRI Palangkaraya 1435-1500*: is playing a beautiful song and I am getting rather emotional and it triggers a stream of consciousness for those lovely years in the past. I think the love for LFs will never die. 1435 UT another song and the Hawaiian type guitars and YL singing. This must be due to Ramadan (Ramazan as in Sri Lanka) extended service because they usually go off at 1400 UT. RRI 3345 also still going on tho very weak. Palangkaraya off at 1500 UT.
RRI Macassar?? 4750 Terribly distorted signal 1502. A week ago no signals noted from the station. Probably an effort for Ramadan?
I didn't have the time to do up my 80m and 160m ham band antennas in the last 2 years, and they are priorities. Imagine my 20-10 Cushcraft log periodic is as good as my 40m and shabby 80m loop on 3 MHz!! (Victor Goonetilleke-CLN 4S7VK, DXplorer Oct 3 via BCDX via DXLD)

INDONESIA. The Indonesian government announced yesterday that Ramadhan would officially begin in Indonesia on Wednesday 5 Oct as the moon wasn't observed in the necessary state yesterday. I'd expect many RRI stations will have extended hours from the early morning of 5 October local time, meaning late Tuesday 4 October UT, to continue until the Idul Fitri holiday in early November (Alan Davies, Indonesia, DXplorer Oct 4 DXLD)

INDONESIA. 3945, RRI Palu instead of RRI Denpasar as reported in DX-Window 278, 1115-1602, Sep 19, regional news, IS, IDs at 1138, 1220, 1253, 1301, 1344, 1536 and 1559. News relayed from Jakarta at 1200-1219 followed by "Pelangi Nusantara" program, i.e. Vernacular and Indonesian pop songs up to 1330. Phone-in music by request programme (tel 62 451 455442) served listeners as far as Manado, about 700 [km?] north-eastward. Mostly Indonesian songs played, but Celine Dion's "The Power of Love", Christian St Peter's "Willingly", Tom Jones' "Green Green Grass of Home", and Dan Hill's "Boulevard" also heard. On closing, OM Bram mentioned Tondo as transmitter site and station address: Jl Kartini 39, Palu. 24332 up to 1324 when signal strolling higher to 3950. (Soehartono (Tony) Ashar, Depok, West Java, Indonesia, DSWCI DX Window Oct 9 via DXLD)

3950, RRI Palu, 1125-1135, Sep 20, various local announcements in Public Service program. 1130 TC followed by Hindu Religion program opened with Balinese typical gamelan which made me came to think of Bali or RRI Denpasar on this hour and this day, Tuesday, 8 weeks ago. 33333 (Soehartono (Tony) Ashar, Depok, West Java, Indonesia, DSWCI DX Window Oct 9 via DXLD)

JAPAN. According to NHK Engineering Head Quarters, termination of domestic short wave relay was decided in March and actually terminated by the end of May. NHK had been using the relay for almost 60 years, but satellite link and quality land line were more reliable and convenient these days, so all relays were terminated. Just for your record, the terminated relays are:

Location Power Modulation Carrier Frequencies: **Sapporo** (Ebetsu) 600 DSB 3970.0 6005.0 9535. **Tokyo** (Shobu) 900 SSB 3607.5 6175.0 9550. **Nagoya** (Nabeta) 300 SSB 3970.0 6005.0 9535.0 **Osaka** (Mihara) 300 SSB 3373.75 5428.0 9181.0 **Fukuoka** (Kasuga) 300 SSB 3259.0 6130.0 9535.0 (Toshimichi Ohtake/ JSWC, Kamakura, Japan and Satoshi Wakisaka, Osaka, Japan, DSWCI DX Window Oct 9 via DXLD)

MALAYSIA. RTM renamed its networks a few months ago: Radio 4 on 7295 is now called Traxx FM. The other renamed networks on SW are Nasional FM (ex-Radio 1) in Malay on 5965v; Asyik FM (ex-Radio 7) in Malay and Orasng Asli languages on 6025. RTM renamings: The Sabah network on 5980v has been renamed as Sabah V FM, but I have not heard the SW frequency for some time. Wai FM in Iban/Bidayuh etc. on Kuching-7270; Sarawak FM in Malay on Kuching-5030 and 7130 (Alan Davies in Dxplorer via DSWCI DX Window Oct 9 via DXLD)

SARAWAK. **7130, Sarawak FM (RTM)**, Oct 9, 1425-1517; same program format as heard Oct 8 on 5030; non-stop reciting from the Koran till 1458; singing jingle (too faint to make out); ToH woman with news (India-Pakistan earthquake, etc), for 10 minutes; music program of light pop songs; 1515 clear singing station jingle for "Sarawak FM"("F…M" was stretched out); several other stations here but still was considerably better than //5030. Pleased to finally have a positive ID. (Ron Howard, Monterey, CA via HCDX)

URUGUAY: Uruguay changes to DST from 0500 UT, Oct 9. So it will be UTC-2. This will be in effect till March 12, 2006. (Horacio Nigro, Uruguay, oct 8 via HCDX)

Övriga radionyheter

Salvo Micciche's DX Handbook

The new release of Salvo Micciche's DX Handbook is now available. For a free download, click on the icon (left menu) at http://www.radioascolto.org/html/index.php. (Good dx, Renato Bruni via HCDX)

Icom IC-7800 amateur transceiver – the ultimate Ham radio

Icom has been developing radio communication equipment for over forty years. Our history has been technical challenge and excellence from the first analog PLL circuit in the IC-200, to the ground-breaking 32-bit floating point DSP of the IC-756PRO. Icom has always given shape to ideas with this technical accumulation. Recent Ham radio stations increasingly use high power and high gain antennas that raise the field strength of unintended signals, and thus require a wider receiver dynamic range. Icom has developed the new flagship model IC-7800 which is a fusion of forty years analog RF circuit development expertise, with cutting edge digital technology.

The result is 110dB dynamic range, +40dB 3rd order intercept point in HF bands and other phenomenal performance features. The receivers combine various current and new technology, to obtain the +40dBm IP3, a specification never before achieved in Ham radio. Quite simply put, the IC-7800 is the ultimate Ham radio. Nothing else comes close! http://www.icom.co.jp/world/products/amateur/7800/index.html Price tag at Universal $10.399!

Brief Icom R-75 Review

I bought a new "stock" Icom R-75 from Universal Radio 7 days ago and have been putting it to rigorous use on LW, MW and SW. I used a 120-11 meter doublet (all band dipole) up at 35 feet and fed with 50 feet of 450 ohm window line to a tuner.
My subjective findings are as follows:
The rig is very small and light weight and would make an excellent DXpedition rig.
It's a surprisingly good receiver, very impressive actually for $570.
On the longwave band I have had easy copy of European and African longwave broadcast stations from France on 162 kc, and Germany on 183 kc, with no IMD.
On the MF AM broadcast band it's very sensitive with easy copy of Norway on 1314 kc and BSKA Saudi Arabia on 1521 kc, with no IMD.
On SW broadcast it's very sensitive with no IMD, including the ham radio bands. Yesterday evening I listened on the 20 and 80 meters SSB ham bands where many strong signals existed and could detect no IMD. I had recoverable audio on AIR 4760 kc Port Blair, Andaman Islands around 0000 UTC two nights in a row. Also easy copy on 90 meter Papua New Guinea stations around 0700 UTC and Australia stations on 120 meters at 0830 UTC.
Seems to me that if I made the Kiwa sensitivity mod which would improve sensitivity by 1.5-3 db, the rig would probably begin showing IMD on LW and SW and would then require a passive preselector. The mod. would probably improve LW sensitivity performance though, albeit with IMD.
I added the INRAD 1.8 kc SSB filter which has a real good shape factor. The stock AM filter is a to wide at -40/-60 db but the stock 2.1 kc SSB filter seems to have a pretty good shape factor.
BTW I usually DX using USB for easier carrier detection then I switch to over to AM. Synchronous AM detection drops out to easily during fades but I've never owned a rig with good ECSS, including my Yaesu FT-1000MP Mark V.
I can't really say much either way about the performance of the adjustable NB because I have an S0 noise level on all bands, as all power lines are buried within 3 miles of my QTH. But the AF DSP is surprisingly effective in making weak stations pop up above the lightning static, as good as my Mark V.

I've owned the following receivers:
My current modern receivers include a Sangean ATS-909, ATS-818, ATS-505P, Grundig S350 and Eton E10.
Older receivers include a Zenith Transoceanic H500 and Royal 7000, Realistic DX-60 and DX-100, Hallicrafters WR600 and S120, Sony ICF-6500W, Kenwood R-1000 and R-2000 and Collins R-390A.
Ham rig's that I've owned with general coverage receive include a Yaesu FT-840, FT-990 and FT-1000MP Mark V Field.
I have been an SWL for 40 years and also a ham for 17 years and have never owned such a good receiver for SWLing as the R-75. But I preface that statement by saying that I've never owned a Drake R-8 series receiver. Owners of the Drake R-8 series and Icom R-75 can comment on how the two receivers compare performance wise.
Comparing the $570 Icom R-75 to my $1800 Yaesu FT-1000MP Mark V Field ham transceiver:
On the LW band the R-75 is better than the Mark V Field as far as sensitivity and IMD.
On the MF band the R-75 is much better than the Mark V Field as far as sensitivity and IMD.
On SW including excluding the ham bands it's equal with the Mark V Field as far as sensitivity and IMD. On the ham bands the Mark V Field has a small edge.
My R-75 has no "noticeable" internal birdies, no CPU noise, no VCO phase noise and no IF Hiss. It's a very sensitive radio too and selective with the INRAD filter installed. (73 & GUD DX, Thomas F. Giella, KN4LF via HCDX)

RX340 WORTH MORE THAN TWO NRDs

Have been adjusting to my new RX340. It certainly is an impressive looking set and the performance is also nothing less than outstanding.
It`s a radical departure from my JRC sets (NRD535D and NRD545). I had always thought the JRCs were excellent but they do not compare to the Ten-Tec receiver. Almost all the stations I heard before are now heard with much stronger reception. Tuning through the bands I now note a number of stations that in the past never got above the threshold level, but now I am able to make out program details. Of course I am still learning the ins-and-outs of the various filters but it is basically an easy set to get the feel for. True, it is expensive, but after trading in both JRCs to Universal Radio, it was not all that bad. The only negative thing I can say about the RX340 is that it makes me want to stay up all night, EVERY NIGHT, and enjoy the reception, which is just not possible. Maybe when I retire, hi (Ron Howard, Monterey CA, Musings, Sept NASWA Journal via DXLD)

Sins Of Transmission?

By: Alexander Hellemans. Vatican Radio's high-power antennas stand accused of causing cancer

The view is impressive, if strange. A forest of about two dozen huge towers supports an intricate web of antenna wires that together pump many hundreds of kilowatts into the atmosphere from a site 25 kilometers north of Rome.
The antennas are the Vatican's portal to the world: signals from two medium-wave transmitters reach all of Italy at all times, while those from 27 shortwave antennas are beamed at selected parts of the world in different languages at varying times. (Only two of the shortwave antennas transmit at any given time.) Thus, papal speeches, news programs, and religious events are dispatched in 40 languages to all the corners of the world, making this complex as important to the Vatican as the Voice of America and Radio Free Europe were to the United States at the height of the Cold War.
But to the inhabitants of Cesano and neighboring communities, the antennas, some transmitting at an effective 600 kilowatts, represent not only a blight on the landscape and something of a nuisance-hearing the Pope's voice picked up by your front-door intercom is not always appreciated-but also a possible health threat [see photo, "Radio Spikes"].
When the antennas were erected in 1951 on a 3.9-square-kilometer plot, the surrounding area, known as Santa Maria di Galeria, was still largely rural.
But during the last few decades the area has been built up, and now an estimated 60 000 people live within a radius of 10 km of the transmitters.
In 2000, a small number of cases of childhood leukemia, first reported by a local physician, were blamed by residents on the strong radio-frequency fields generated by the Vatican antennas.
On the one hand, leukemia incidence was higher close to radio towers; on the other hand, the difference was Statistically Insignificant
This past May, an Italian court imposed suspended 10-day prison sentences on two Vatican officials responsible for operating the transmitters, a cardinal and a priest, for the "dangerous showering of objects"-meaning the antennas' electromagnetic waves. (The term "electromagnetic radiation" has not made it yet into Italy's legal vocabulary.) In addition, environmental groups and committees representing the local population will be awarded damages in a separate civil action, though the figures have yet to be determined.
Local residents and environmentalists have sought to have the Vatican close down the complex since 2000. Several years ago, an Italian environmental minister, Willer Bordon, organized field strength measurements and found that the Vatican's radio transmitters violated Italy's radiation standards, which are much stricter than those in other parts of the world. He threatened to cut off electric power to the site; in response, Vatican Radio reduced the time it was on the air and transferred some radio transmission to other sites.
The Vatican's situation improved in 2002, when courts ruled that the Italian government had no jurisdiction over the transmitters because of the Vatican's status as an independent state. But in 2003, Italy's Supreme Court overturned those rulings, which resulted in the two Vatican officials' having to stand trial [see photo, "Divine Right of Way?"] What does science say? While the complaints against Vatican Radio were bouncing back and forth in the Italian courts, the regional government commissioned an epidemiological study of leukemia incidence in the area around the disputed antennas. A team of researchers led by Paola Michelozzi of the Local Health Authority, in Rome, reported in 2002 that the incidence of childhood leukemia from 1987 to 1998 was twice the expected rate, but the actual numbers were very small. The results, published in the American Journal of Epidemiology, indicated that instead of the expected 3.7 cases in the population of 60 000, there had been eight. Because of the small number, Michelozzi considers the result statistically insignificant. But a somewhat more disconcerting finding in her study made a stronger impression on critics of the Vatican, members of the press, and even some experts.
Michelozzi's survey determined that if leukemia incidence was measured in concentric circles around the radio complex, rates dropped off with increasing distance from the transmitters. Based on that finding, a court-appointed expert science panel in the legal proceeding

against the Vatican concluded, questionably, that "the weight of evidence...is much more in favor of the existence of a [cancer] risk" and that it "is in favor of a causal relationship." That assessment, together with the Vatican's violation of Italian power limits, is what prompted the guilty verdict last May against the Vatican officials.

Similar studies of populations around radio and television transmitters have been conducted during the past two decades in several countries, including the United States, Switzerland, the Netherlands, and New Zealand. But all these studies are crippled by the very low normal incidence of leukemia, the need to study very large populations, and the technical difficulty of accurately determining actual exposure levels. "The situation has not changed that much. If you look at the string of recent epidemiological studies, they are still equivocal," says Keith Florig, a specialist in risk analysis and radiation protection at Carnegie Mellon University, in Pittsburgh. Florig expressed surprise at the court's ruling in the Vatican case.

Others agree that the ruling was premature. "I'm quite concerned about a rush to judgment based on a less-than-adequate understanding of the scientific issues," says Wayne Overbeck, a specialist in the legal aspects of communications at California State University, in Fullerton. (Overbeck, a ham radio operator, takes precautions to avoid exposing himself and other people to excess RF radiation.) Local inhabitants, on the other hand, reacted to the Italian court's finding with jubilation. "We are satisfied; we had to suffer the arrogance of the Vatican for years," one resident told the press. Representatives of Vatican Radio, maintaining that the radiation levels are safe, said that they found the judgment unjust and plan to appeal it.

The case of Vatican Radio is but the latest episode in a half-century-long scientific controversy. Last December, a panel of the International Commission on Non-Ionizing Radiation Protection (ICNIRP), headquartered in Oberschleissheim, Germany, published a global review of epidemiological studies dealing with the impact on health of electromagnetic waves. The report covered a range of RF sources, including cellphones and communication towers, and one section reviewed eight epidemiological studies of residents living around radio and television transmitters, including Michelozzi's study.

The panel found the results inconclusive. "For these studies to be informative, there have to be better exposure assessments, and the numbers [of people in the samples] should be larger," says Anders Ahlbom of the Karolinska Institute in Stockholm, Sweden, who led the study. "Even taken together, they don't really suggest any health risks," he says.

RF radiation is nonionizing-that is, it cannot break the bonds in molecules-and no plausible biophysical mechanism has been proposed that would predict biological effects from low-level fields, except as related to heating. Therefore, many scientists in the field have viewed research on the biological effects of radio waves with some skepticism. Radio frequencies do, however, induce currents in parts of the human body, which can resonate as a half-wave antenna: there is a maximum in the fraction of incident energy that is absorbed in the whole body at 100 megahertz and at 800 MHz in the head-the latter is close to the 850 and 900 MHz frequencies used for mobile phones in the United States and Europe. Exposure limits, such as those recommended by the IEEE, take that effect into account.

In addition to epidemiological studies, researchers are looking at what happens to cultures of human cells (and also of other organisms) when they are exposed to radio waves of intensities that do not produce any significant heating in the material in which the radiation is absorbed. Most useful for risk assessment are standardized animal studies, which are being undertaken in a number of labs around the world. But some researchers are pursuing other areas of investigation, some of which are scientifically controversial.

At CNR-IREA, the Italian National Research Council's Institute for Electromagnetic Sensing of the Environment, in Naples, researchers place petri dishes with cell cultures in beams of radio waves and then compare the cells with control samples that have not been irradiated. DNA damage, cell division, oxidative stresses, and the induction of apoptosis (cell death) are some of the effects the small Naples group investigates.

So far, however, such studies "do not produce a coherent picture," says Maria Rosaria Scarfi, a researcher at CNR-IREA. Fundamentally, the absence of theoretical models explaining the interaction between electromagnetic fields and biological systems complicates the research, she says.

Despite the lack of compelling results, whether the focus is on cellular changes or statistical anomalies found in connection with radio transmitters, high-power lines, or mobile telephony, Ahlbom thinks that research should continue, because RF radiation is so ubiquitous. "So many people are exposed. I think it makes sense to try to investigate as much as possible whether there might be any risks, although the likelihood is against [there being any] risks."

In the meantime, the inhabitants of Cesano can, in principle, rest assured that they are in no great danger. "The exposure from the [Vatican] transmitters is much lower than what you receive from ordinary cellphones-several orders of magnitude lower," says Ahlbom. This does not mean, however, that Cesano residents actually are relaxing or giving up their struggle to close down the Vatican complex altogether.

Italy's stricter limits on RF energy exposure, ironically, seem to be have made the public more ill at ease rather than more confident. Though they were intended to provide an extra measure of safety, the limits "actually increased public fears and controversies," concludes Paolo Vecchia of Italy's National Institute of Health, in Rome, and Kenneth R. Foster, a professor of biophysical engineering at the University of Pennsylvania, in Philadelphia. Vecchia and Foster believe this is because the public took the stricter Italian limits to be an admission that RF fields really are dangerous in the long run.

For this very reason, Vecchia and Foster note in an article they wrote about the Vatican controversy for IEEE Technology and Society in winter 2002, the World Health Organization in Geneva has advised against adoption of overly cautious exposure limits. The organization warns that the credibility of exposure standards is undermined if limits are lowered to levels "that bear no relationship to the established hazards or have inappropriate arbitrary adjustments."

(-Alexander Hellemans, http://www.spectrum.ieee.org/oct05/1866 (via DXLD/HCDX))