



**BOLETÍN ESCUCHAS DEL MUNDO**  
**FEBRERO 2010**



En la fotografía, Luis Valderas, Acompañado de Alfonso y Jaime de Radio Nederland, este mes de Febrero, lo saludamos por haber representado a la Comisión de Radioescuchas de FEDERACHI, con una histórica última participación en la edición final del Programa "Aventura diexista" de HCJB, Ecuador.

**Patricio de Los Rios E. CA6UQT**

**[patorios@msn.com](mailto:patorios@msn.com)**

Jefe comisión de Radioescuchas  
FEDERACHI

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# ONDA CORTA DESDE CHILE

## ANTILLAS HOLANDESAS

17605, Radio Nederland Worldwide, 2100. Indican señal de identificación en holandés y comienza lectura de noticias a cargo de dos locutores. SINPO: 44444. (Patricio De los Ríos, CA6UQT, Temuco)

## ARABIA SAUDITA

11600, Saudi Radio, 1510. Programa con rezo de El Corán. SINPO: 33333. (Patricio De los Ríos, CA6UQT, Temuco)

17650, Saudi Radio, 1405. Programa en árabe con rezo de El Corán y comentarios en francés. SINPO: 44444. (Patricio De los Ríos, CA6UQT, Temuco)

## ARGENTINA

6060 RAE, 22:00, programación en castellano, boletín de noticias, 22:50 "Actualidad DX", se anuncia 15345 Khz. pero es nula recepción, SINPO: 44444 (Hugo López, CE3BBC, Chile)

11710, RAE, 1316, Servicio en castellano, noticias locales, clima y música folclórica, programa "Emprendedores" 35443 (Hugo López, CE3BBC, R-5000, Chile),

## ASCENCION

15195, WYFRI, 2040. Programa en inglés con notas y lecciones sobre la Biblia a cargo de un pastor, a las 2100 tocan el estribillo musical típico. SINPO: 22222 (Patricio De los Ríos, CA6UQT, Temuco)

15350, BBC, 1800. Señal de identificación y noticias de actualidad sobre el terrorismo y sus implicancias en USA y Europa. SINPO: 22222. (Patricio De los Ríos, CA6UQT, Temuco)

## AUSTRALIA

17750 R. Australia, 04:12 Música y noticias en inglés, baja señal 25432 (Hugo López, CE3BBC, R-5000, Santiago)

15.415 R. Australia, 23:50 noticias en inglés, SINPO: 25332 (Hugo López, CE3BBC, R-5000, Santiago)

## BRASIL

6080. Radio Cacao nova, en idioma portugués, música religiosa e locutor varón y invitación a llamar por teléfono, desea a los oyentes una buena sintonía, SINPO: 45444, (Héctor Frías CE6FZL, Santiago)

11735, Radio Transmundial, 1520. Programa con música cristiana en portugués de corte lento y suave, indicaron señal de identificación. SINPO: 33333. (Patricio De los Ríos, CA6UQT, Temuco)

11750 11/Jan 1502 R Voz Missionária, desde Camboriú. Sintonizada a las 1503, Identificación, mas no informa a frecuencia de 11750 kHz. SINPO: 35433 (Jorge Freitas-Brasil)

11780, Radio Nacional da Amazonia, 1510. Programa con música típica, avisos comerciales y señal de identificación, "Radio Nacional". SINPO: 22222. (Patricio De los Ríos, CA6UQT, Temuco)

11800, Radio Brasil Central, 1540. Programa con señal de identificación y avisos comerciales y de utilidad pública. (Patricio De los Ríos, CA6UQT, Temuco)

11925, Radio Bandeirantes, 1530. Programa en portugués donde indican la señal de identificación y salen al aire opiniones de transeúntes. SINPO: 2222 (Patricio De los Ríos, CA6UQT, Temuco)

#### **CANADA**

11990 Radio Canadá Internacional, 2305 Noticias en castellano, elecciones en Chile. SINPO: 45444 (Hugo López, CE3BBC, R-5000, Santiago)

#### **CROACIA**

7375, Voz de Croacia, 0400. Programa en español con noticias sobre el terremoto en Haití y la presencia de ciudadanos croatas en la zona afectada, así como la colaboración desde Croacia. SINPO: 44444. (Patricio De los Ríos, CA6UQT, Temuco)

#### **CHINA**

17550, Radio CNR1, Radio Nacional de China, 0211, escuchada en idioma Mandarín, desde el centro emisor de Beijing, dos personas hablan "non Stop", mucho ruido, SINPO: 35322, (Héctor Frías CE6FZL, Santiago)

#### **EGIPTO**

9390, Radio el Cairo 2321, en árabe desde su centro emisor en ABU ZAABAL, llegando al cono sur con buena calidad de audio sin la distorsión habitual en la modulación, el programa escuchado, música, SINPO, 35323, (Héctor Frías CE6FZL, Santiago)

#### **ESLOVAQUIA**

11660, Radio Eslovaquia Internacional, 1540. Comentarios de noticias locales de actualidad económica, donde se trataron los efectos de la crisis económica internacional en Eslovaquia. SINPO: 44444. (Patricio De los Ríos, CA6UQT, Temuco)

#### **ESPAÑA**

17755, Radio Exterior de España, 1548, Escuchado el programa Tablero deportivo a la hora de la escucha sintonizado un despacho desde Santander con la formación de un equipo de Fútbol, SINPO: 35333, (Héctor Frías CE6FZL, Santiago)

#### **ESTADOS UNIDOS DE AMERICA**

5810, WEWN, 2345, emisión en español, desde Vendiver, música con segmento al perecer en Creole, con música religiosa en ese estilo, podría ser un programa especial destinado a las víctimas del 12 de Enero en Haití?, calidad optima, SINPO: 45444. (Héctor Frías CE6FZL, Santiago)

13600, WEWN, 1600. Programa en español en que se comentó sobre la matanza de los inocentes. SINPO: 33333. (Patricio De los Ríos, CA6UQT, Temuco)

13715, Voz de América, En español, 1329-1547, Escuchado el programa de fin de semana Top-ten música, luego el programa música "Country" buena señal, SINPO: 45444, (Héctor Frías CE6FZL, Santiago)

#### **FILIPINAS**

9405, PHL FEBC Manila, 2257, escuchada el pasado sábado (UTC domingo), finalizando su emisión en mandarín indicando sus direcciones de internet, finalizando con música una breve pausa y reanudando su emisión, Señal muy buena, 45444, (Héctor Frías CE6FZL, Santiago)

#### **GUINEA**

7125 Radio Conakry, 22:37 transmisión en francés, música y comentarios, buena escucha desde África a tan temprana hora (19:37 Local verano). SINPO: 35443 (Hugo López, CE3BBC, R-5000, Santiago)

#### **INDIA**

9870, All India Radio, 0225, Música Hindi cantada por una mujer cada dos temas habla un hombre, durante la escucha nunca se identifico, Calidad perfecta de señal, con poco desvanecimiento, SINPO: 45444, (Héctor Frías CE6FZL, Santiago)

11735, All India Radio, 0225, desde el centro emisor de "Algarhi", servicio domestico, música Hindi cantada por una mujer cada dos temas habla un hombre, durante la escucha nunca se identifico, Calidad perfecta de señal, con poco desvanecimiento, SINPO: 45444, (Héctor Frías CE6FZL, Santiago)

#### **IRAN**

7225, Escuchada la Voz de la Republica Islámica de Irán, en idioma Español, el programa "Actualidad" con una entrevista a una diputada de Venezuela, muy buen señal, sin interferencias, SINPO: 35333, (Héctor Frías CE6FZL, Santiago)

#### **ISLAS MARIANAS**

15265, USA Radio Free Asia, 2312, en idioma Mandarín, destinada al Asia, desde el centro emisor de MRA-s, Islas marianas del Norte, la programación escuchada fue en Chino conversación "non Stop", espectacular señal, SINPO: 45444,( Héctor Frías CE6FZL, Santiago)

#### **KUWAIT**

17730, Radio Free Asia, Tibetano, 0201, noticias o comentarios políticos, leídos por una mujer y un hombre, Excelente señal, SINPO: 45444, (Héctor Frías CE6FZL, Santiago) **(RADIOESCUCHAS DE SANTIAGO?)**

#### **JAPON**

17810 NHK World, 04:10 programación en japonés, SINPO: 35533 (Hugo López, CE3BBC, R-5000, Santiago)

#### **MARRUECOS**

9575, Radio Medi-1, 0420. Programa con música variada típica de África del Norte, no hay locución ni comentarios. SINPO: 44444. (Patricio De los Ríos, CA6UQT, Temuco)

#### **PERU**

6173, Radio Tawantinsuyo, 1036-1047, escuchada en una frecuencia llena de ruidos causados por interferencias de varios canales entre 6170 y 6175, se hace muy difícil escucharla en todo el mensaje, la música era mejor identificable que las palabras, muy variable e inestable por momentos pierdo casi totalmente la señal, SINPO: 32332, (Héctor Frías CE6FZL, Santiago)

#### **PORTUGAL**

11865 Deutsche Welle, 23:40 Noticias en alemán, elecciones en Chile, SINPO: 55545 (Hugo López, CE3BBC, R-5000, Santiago)

15465, RDP PORTUGAL, 1848-1950, Hombre relata futbol en vivo, Relato del partido del Benfica. Se comenta el minuto 36, Comentario del futbol del Benfica y una tarjeta amarilla, Un cuarto de hora para el final del partido emisión vivo desde el estado Da luz, SINPO: 45444, (Héctor Frías CE6FZL, Santiago)

#### **REPUBLICA CHECA**

13580, Radio Praga, 1515, Programa en español para Sudoeste de Europa, comentaron sobre la carrera deportiva de un destacado futbolista local, como parte del resumen de la prensa checa. Indicaron ID: "sintonizan Radio Praga", anunciaron programa de la cultura checa. SINPO: 22222. Fecha: 5 de enero de 2010. (Patricio De los Ríos, CA6UQT, Temuco)

#### **RUMANIA**

9575. Radio Rumania Internacional, 2230, Aspectos de un Dios Rumano. Saludos navideños y de año nuevo. El saludo de Manuel Pavon, saludos al mundo diexista, carta de Dino Bloise, Mensaje anual al mundo del DX, carta desde Venezuela, Carta desde Tucumán, carta de Luis Valderas. SINPO: 44444 (Héctor Frías CE6FZL, Santiago)

9765, Radio Rumania Internacional, 0300. Programa en español con noticias de actualidad económica de Rumania, y de la integración de esta a la Unión Europea. SINPO: 44444. (Patricio De los Ríos, CA6UQT, Temuco)

## **RUSIA**

11830 Deutsche Welle, 23:44 Programa en chino, locutora, noticias?. SINPO: 45444 (Hugo López, CE3BBC, R-5000, Santiago)

## **RWANDA**

12025, Deutsche Welle, 2323, Emisión en Alemán, desde su centro emisor en Kigali en África central, la programación escuchada fue un segmento musical, SINPO: 45333, (Héctor Frías CE3FZL, Santiago)

## **SRI LANKA**

12110, RFA-RL, 0234 en un dialecto oriental, dos hombre dialogan y cada cierto tiempo música a modo de cortina, se trata del repetido de Irana Willa Sri lanka con destinación Asia Central, conversan sobre algún tema de multimedia, Calidad optima, SINPO: 45444, Héctor Frías CE6FZL, Santiago)

17800 Deutsche Welle, 04:11 Programa en alemán, SINPO: 35533 (Hugo López, CE3BBC, R-5000, Santiago).

## **TAJIKISTAN**

7275, USA Radio Liberty, 0205, desde su centro retransmisor en TJ, con emisión hacia CAs, emisión de los domingo UTC a lunes, (fin de semana), en idioma Ruso, se comenta de las acciones de EEUU en Haití, lee un hombre las noticias, SINPO: 45444, (Héctor Frías CE3FZL, Santiago)

## **TAILANDIA**

17770 RFE/R. LIBERTY 04:13 Noticias, programación en ruso. SINPO: 25432 (Hugo López, CE3BBC, R-5000, Santiago)

17860 Voz de América, 04:15, programación en tibetano, música. SINPO: 25442 (Hugo López, CE3BBC, R-5000, Santiago)

## **TIBET**

7240 PBS, 2319 Programación en chino, locutor, mx, SINPO: 25432 (Hugo López, CE3BBC, R-5000, Santiago)

# **NOTICIAS DESDE ARGENTINA**

## **ACTUALIZACION DE LA INFORMACION SOBRE RAE**

Gabriel Iván Barrera, Editor de Actualidad DX y Suplemento de Actualidad DX de RAE, ante la consulta sobre el corte en las emisiones desde Argentina nos informa:

"En relación con las ondas cortas, frecuencias 11710 y 15345 kHz, desafortunadamente tengo que confirmar que desde el pasado 27 de Octubre 2009, están fuera del aire por problemas técnicos del transmisor General Eléctrica, un muy viejo transmisor que llego a su fin de vida útil."

Nos dice: "Esta comprometida la compra de un nuevo Transmisor, pero su entrega esta demorada." Entretanto, las emisiones de RAE solamente se pueden oír via Internet. Por su parte Hugo López, CE3BBC en Santiago, ha estado reportando la escucha del programa DX en la frecuencia de 6060 en 49 metros

Gabriel Barrera, vía Héctor Frías Enero 21, 2010

## XR2A, FARO CHILENO EN EL AIRE

The image shows a QRZ.COM call sign card for XR2A. At the top left is the call sign 'XR2A' in large red letters. To its right is the flag of Chile. Below the call sign and flag, the text reads: 'PUNTA ANGELES LIGHTHOUSE, ARLHS CHI 001', 'VALPARAISO-CHILE', 'P. O. BOX 159, LA CISTERNA, SANTIAGO', and 'DX TEAM - XR2A'. On the right side of the card is a photograph of the Punta Angeles Lighthouse, a red and white tower. A large 'SAMPLE' watermark is overlaid diagonally across the center. At the bottom, there is a table with columns for 'TO RADIO', 'DATE', 'UTC', 'MHZ.', 'RST', '2 WAY', and 'QSL'. Below the table is the URL 'http://www.qrz.com/db/xr2a'. On the left side, there is vertical text: 'DISEÑO IMPRESION cc3lbc@hotmail.com'. On the right side, there are logos for 'GERAC', 'DGAC', 'inter WINS', and a Chilean flag.

**RADIOAFICIONADOS CHILENOS PARTICIPAN EN EL FIN DE SEMANA DE FAROS SUDAMERICANOS, USANDO EL INDICATIVO XR2A, DESDE EL PRIMER FARO CHILENO, "PUNTA ANGELES" ARLHS CHI-001**

En los próximos meses veremos incrementada favorablemente la actividad de Faros, a causa de la segunda edición del "Fin de Semana de Faros sudamericanos".

Es así como los días 26, 27 y 28 de Febrero 2010 habrá una gran cantidad de estaciones transmitiendo desde locaciones marítimas asociadas a faros. En Chile ya inscribió el Faro PUNTA ANGELES, cuya codificación es ARLHS CHI-001, con el indicativo Xilófono Romeo dos Alfa, indicativo aprobado por la SUBTEL de Chile para los días Señalados.

La transmisión se llevara a efecto desde el Faro Punta Ángeles, inauguro el año 1837 y cuya ubicación es en Valparaíso CHILE, V Región, y cuya Latitud: 33°01'12" Sur, Longitud: 71°38'52" Weste, con una altura de 18 metros se eleva por encima de la vista

**Alcance luminoso:** 32 millas náuticas.

**Acceso:** El acceso está ubicado en Avenida Subida Cementerio Nº 300, en las cercanías de playa Las Torpederas de Playa Ancha, a la cual se accede por Avenida Altamirano y en locomoción colectiva desde el centro.

**Historia:** Es el primer faro construido en Chile a instancias del honorable Cabildo de Valparaíso, surgido de la imperiosa necesidad de indicar a los navegantes la entrada a puerto. Dicho faro se inauguró el 18 de Septiembre de 1837, en el lugar llamado Punta Ángeles, donde actualmente se sitúa la Escuela Naval "Arturo Prat".

El primer faro fue el denominado "Valparaíso", inaugurado el 18 de septiembre de 1837, al año siguiente se reubicó en la Punta Ángeles (nombre actual del faro). En 1967 su torre de fierro fundido fue reinstalado en su ubicación definitiva: el Complejo Marítimo Punta Ángeles, donde funcionan oficinas de la Directemar.

Bajo la presidencia del Sr. José Joaquín Prieto, se dictó el Decreto Supremo N° 109 de fecha 09 de Noviembre de 1837, que autorizó la construcción de un faro en las inmediaciones del puerto, que reemplazara al instalado en Punta Ángeles, con fondos propios del Cabildo de Valparaíso.

Documentos de la época lo describen como sigue: "La torre es de madera, pintada de blanco, su figura es una pirámide cuadrangular; su base es un cuadrado de 23 pies, la altura de 60 pies castellanos hasta el pie del farol, la camisa tiene 11 pies en cada frente; el fanal es de 12 pies de alto y 6 de diámetro, de forma cilíndrica y techo de fierro; la luz de color natural y es bastante clara para distinguirse a distancia de 10 leguas en tiempo claro".

Este faro cuenta con una sala de exhibición histórica de faros llamado "George Slight" en honor al ingeniero y constructor de faros escocés. Actualmente, el faro Punta Ángeles y la sala de exhibición "George Slight" son visitados por más de 2000 personas al año.

El faro fue modificado en los años 1857 y 1935, y en el año 1987 se instala su actual sistema de iluminación a gas xenón con una potencia de 2.000w 9.600.000 candelas y un alcance de 32 millas náuticas, siendo de esta manera uno de los de mayor potencia en existencia. Tiene una torre de fierro de 18 m de altura y se encuentra a 60m, sobre el nivel del mar.

**Panorámica:** Desde el faro se puede apreciar el camino costero, la playa Las Torpederas, el mirador costero y los cerros de Playa Ancha.

**El grupo de activación del Faro estará compuesto por:**

- \* **Ricardo Velásquez Aravena CE3HDI,**  
Modalidad Telegrafía en bandas HF, 40, 20 metros.
- \* **Héctor Frías Jofre, CE3FZL,**  
Modalidad Fonia, 20, 15, 10 metros
- \* **Hugo López Carmona, CE3BBC,**  
Modalidad fonia 40 metros, VHF y sistema digitales.
- \* **Esteban Asenjo C, XQ7UP,**  
Estación de Satélite

La activación programada se enmarca en la jornada de fin semana de Faros sudamericanos y cuenta con el Apoyo de la Federación de clubes de Radioaficionados de Chile FEDERACHI y con activa participación de socios del Radioclub de Aeronáutica civil CE3RC.

**QSL Información:** Un prototipo de la QSL diseñada para la ocasión, se acompaña en la grafica de este reporte y la forma de obtener la verificación del contacto está definida en [www.qrz.com](http://www.qrz.com)

Junto con Faro Punta Ángeles serán muchos los que saldrán al aire el listado completo puede obtenerse visitando la pagina del Bahía blanca DX club. [www.grupodxbb.com.ar/faros.htm](http://www.grupodxbb.com.ar/faros.htm)



## CONCURSO DE RADIO RUMANIA INTERNACIONAL

Y ahora, he aquí las preguntas que forman las bases del concurso:

¿Con qué otros departamentos territoriales linda Buzău? - ¿Dónde está exhibido el Tesoro de Pietroasa, conocido también bajo la denominación popular de „Clueca con pollos de oro”, tesoro arqueológico, descubierto en el año 1837, en la localidad de Pietroasele, de este departamento?

¿En qué localidad se encuentra una mina de petróleo, única en Europa? - Mencionen otros 4 alicientes turísticos del departamento de Buzău.

También les rogamos nos escriban qué les ha motivado a participar en este concurso, y, en la medida en que lo deseen, mencionen, también, las fuentes de información, si son otras que los programas de nuestra emisora y el sitio de internet de RRI, o nuestros perfiles en Facebook, Twitter y Flickr.

**Nuestras coordenadas siguen siendo las mismas:**

Radio Rumanía Internacional, calle General Berthelot, nr. 60-64, sector 1, Bucarest, Casilla de Correos 111, código 010165, fax 00.40.21.319.05.62, Nuestra dirección electrónica es: span@rr.ro. También nos pueden comunicar directamente sus respuestas rellenando este formulario de nuestra página web. Esperamos sus participaciones, estimados oyentes, hasta el 31 de marzo del 2010, fecha del matasellos.

Anunciaremos los ganadores, a mediados del mes de abril.

¡Les deseamos mucho éxito!

## TERREMOTO HAITI



**13 de Enero 2009:** Escuchado las frecuencias indicadas previamente en diferentes listas, de radioaficionados y en general de Onda media local y radios por Internet, puedo comentar que no existiendo Radioaficionados de la zona de la catástrofe en el Aire (aficionados de Haití), en las frecuencias de 40 metros, las frecuencias señaladas han estado sin información, lo mismo ha sucedido con las radios online las cuales en pantalla han entregado un mensaje de estar fuera del aire. Las redes desde Miami y Cuba si han funcionado, encontrando bastante

actividad mediante la coordinación de Arnaldo Coro Antich, CO2KK. (el mensaje enviado a listas fue)

Se ruega dejar libres las frecuencias de 7.045 y 3.720 MHz para el posible tráfico de emergencia con motivo del terremoto que ha sacudido Haití esta madrugada, día

**13 de enero del 2010:** Information de Ramon Santoyo V, XE1KK, Jim Linton VE3PC and the CQ / World Radio Online Newsroom, 73, Greg, G0DUB, IARU Region 1 Emergency Communications coordinator

**14, enero 2009:** En definitiva solo ha sido posible escuchar en frecuencia de 14300 ssb, a un Radio aficionado de Puerto Príncipe HH6JH, que logro contactar el miércoles por la tarde con la Red Intercontinental de Asistencia y Tráfico (IATN), la frecuencia global central de actividad de IARU para comunicaciones de emergencia. También logre escuchar un contacto realizado con una estación de EEUU, quien muchas veces indicaba en la frecuencia, que el QSO, se trataba de un tráfico de emergencia por el sismo de Haití y que no se trataba de un contest. (Héctor Frías, Chile)

## **EXPEDICIÓN DX LEM287 DXpedition to Lemmenjoki, December 27, 2009 - January 9, 2010**

by Mika Mäkeläinen

My second DXpedition of the season was pretty successful, but very different from last year at the same time. Chinese stations ruled the AM band, and overall reception from Asia was very good, a stark contrast to the 271th DXpedition in Lemmenjoki a year earlier, when very few Far East stations were heard. Limited propagation to the Western Hemisphere was a bit disappointing considering that in terms of solar weather all preconditions for excellent reception did exist. Nevertheless, we got several U.S. daytime-only stations, which is always a cause for celebration.

After a traditional Christmas vacation trip with family to my original hometown Tampere, I scrambled to repack my car with all the necessary DXpedition stuff. And there was a lot of it, even though receivers nowadays take less space than ever. It seems that external hard drives easily occupy whatever space is left, and once again, I had more of them than ever before. You know, you have to be prepared for those elusive AM DX conditions of the century - even if listening to the highlights would take years.



On the road again

I set out on Monday morning at 8:30 a.m. when it was still dark, with the aim of reaching Lemmenjoki late at night. I stopped briefly to refuel myself and the car in Pyhäsalmi in Central Finland on Highway 4, and when I got back on the road, it was already getting dark. I had barely slept at night, so just staying awake was a bit challenging, and driving in light snow and slippery roads wasn't exactly helpful. I saw a couple of trucks stuck on an uphill stretch. Finally in Rovaniemi on the Arctic Circle, where I shopped for groceries, I just had to close my eyes and rest for half an hour in the car. It made all the difference, and afterwards it was rather easy to stay awake for the rest of the journey. I finally arrived in Lemmenjoki around 12:30 a.m., after 16 hours and 1140 km (710 miles) of traveling.



A sign in Pyhäsalmi says it is still 287-890 kilometers to Lapland. Exactly - it depends where in Lapland you're traveling to!

#### Adios Cuba, Nihao China

Fellow DXer Jari Ruohomäki from Oulu had arrived in Lemmenjoki two days earlier, and left back home three days earlier than me, but most of the DXpedition we shared the cabin. On Jari's first two days of listening stations from the Midwest and the Rockies had come fairly well. After my arrival reception of North American signals continued daily from around 2100 UTC to 1500 UTC, or even around the clock if Alaskan stations are counted. Generally stations were heard from Coast to Coast as long as a path of darkness existed between us and the

radio stations. A few daytimers crowned our evenings. On Sunday, January 3, 2010, reception conditions changed. In terms of the U.S., nighttime conditions worsened significantly, mostly Western stations were heard during the daytime, and Canadians became even more dominant than before.

Very few Cuban stations were logged, a major difference from LEM271 a year earlier. Also other Latin Americans were weak, and we only got a fleeting taste of the remarkable midwinter phenomenon of Brazilian and Argentine stations emerging strong around 0700-0830 UTC. A nice exception was the rise of Venezuelan and Colombian stations exceptionally late on Wednesday, January 6. Greenland's national radio KNR was hardly ever heard, although a year ago it was a major nuisance covering interesting trans-Atlantic frequencies. Arctic Radio on 1584 kHz, a special short-term station in Morokulien in neighboring Sweden, was not heard at all in Lemmenjoki.

The most pleasant experience was the extremely strong showing of Chinese stations throughout the DXpedition, as well as Philippine stations on Friday, January 8. Also a couple of shortwave catches, Radio Symban from Australia on 2368.5 kHz and Radio San Carlos from Costa Rica on 2859.82 kHz, were positive surprises. Generally AM conditions kept us busy enough without having to resort to shortwave, where there would be very few stations to hunt anyway. A more detailed description of the propagation conditions on each day can be found in the end of this report.



Highways of the north - snow mobiles are the way to get around here.

We both used software-defined receivers, although Jari also had one JRC NRD-535 for browsing the dial. I worked with two Perseus receivers and Jari with an array of SDR-14 and SDR-IQ receivers, enough to cover the entire AM band. A total of 11 beverage antennas, each about 1 kilometer in length, all proved to be useful at one time or another.

Our DXing was very intensive and resulted in sleep deprivation. The daily DX routine allowed slots for sleep roughly at 1700-2030 UTC, and again in the early morning at around 0300-0550 UTC. A couple of books reserved for pastime in case of very poor conditions remained untouched.



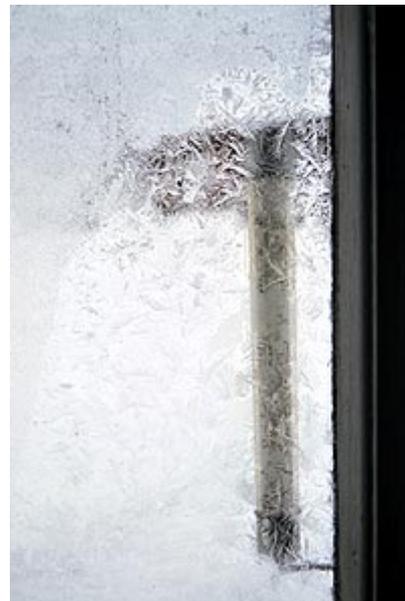
The coldest and coolest place in Lapland

### Cold as in Alaska? You betcha!

As everyone knows, sauna is an integral part of the Finnish lifestyle, and you sometimes hear people bragging about how high temperatures their sauna has reached. Well, our sauna was the coldest I have ever been to - initially just 42 degrees Celsius, roughly half of what Finns would consider normal and a third of what the most ardent aficionados can endure. After spending an hour in the sauna it finally warmed to a bearable level.

The stove in our landlady's sauna is no longer in the best possible shape. Still, the cabin itself - which doesn't have a sauna - is in an even more rundown condition. The floor is leaning to one edge, and insulation is so poor that in addition to electric radiators you need to keep burning wood in the stove just to keep warm. Elementary, but serves the purpose.

On arrival I noticed that the door handle had fallen off from the outside. Previous dxpeditonists had replaced it with a metal wire which you had to pull to open the door. Then one day it broke off, the door was pretty well stuck, and I was outside. Fortunately this time around I wasn't visiting the outhouse semi-naked, but appropriately dressed for the -27 degree temperature outside, as I was leaving to get some more groceries. The nearest shop is a mere 40 kilometers away. When I returned, a neighbor helped to fix the door temporarily with a spare handle.



And the weather forecast for today, looks like it's gonna be a cold morning...

Lemmenjoki is a notoriously cold place. During this DXpedition the lowest recorded temperature was -38 degrees Celsius (-36 F), even though the national record for this winter is so far "only" -37 degrees. There are no official weather stations of the Finnish Meteorological Institute anywhere nearby, so these cold spells never make it to history books. Officially, the lowest temperature ever recorded in Finland is -51.5 degrees Celsius, but at the same time the temperature in Lemmenjoki was -58 degrees Celsius (-72 F).

### This is what the solar weather indices looked like during our DXpedition:

Date	Solar flux at Earth	Sunspot number		Planetary A index			K indices (3-hour intervals)		Min-max solar wind speed (km/sec)	Number of flares (events)		
		STAR	NO AA	STAR	NO AA	Daily low - high	Planetary	Boulder		C	M	X
27.12.2009	76.8	19	17	2.1	2	0-5	00111100	00112200	344-432			
28.12.2009	75.8	16	17	0.9	1	0-3	00010000	00010100	326-349			
29.12.2009	74.7	21	17	0.5	0	0-2	00000000	00000000	269-345			

30.12.2009	76.9	19	15	0.0	0	0-0	00000000	00010001	269-271			
31.12.2009	79.9	18	18	0.8	1	0-2	00000000	00110100	269-278			
1.1.2010	75.2	17	16	0.9	1	0-5	00000001	00000102	270-302			
2.1.2010	78.0	18	22	0.4	0	0-3	00000001	00000100	270-337	3		
3.1.2010	76.4	16	20	3.3	3	0-7	01122000	02222100	271-311	1		
4.1.2010	74.5	13	15	2.0	2	0-6	00210000	00220100	270-341	1		
5.1.2010	76.8	0	13	1.0	1	0-4	00000100	00101100	270-336			
6.1.2010	77.3	0	0	0.9	1	0-3	01000000	01000100	275-347			
7.1.2010	78.1	14	15	0.9	1	0-3	00000001	00100000	270-332			
8.1.2010	77.4	14	14	1.5	2	0-3	00100100	00210000	270-323			
9.1.2010	81.7	23	20	1.4	1	0-4	00001101	00001100	270-288	1		
10.1.2010	84.4	27	25	2.3	2	0-5	00011101	00111200	270-324			

(information collected by Jan Alvestad)

Here's a closer look at the propagation conditions day by day. Jari reports on the first two days, and I'm covering the rest:

Sunday, December 27

Jari: LEM287 is now on. I arrived yesterday evening before 19 UTC. Having given some tulips to our 90-year-old host Kristiina it was time set up the listening post. I am not sure about the quality of the conditions in the night because I had to concentrate on controlling all the 6 SDRs and 1 NRD in a sensible way and sleeping as well. There were Yankees all day long till 15 UTC. It seems that the most interesting moments were before noon. I noticed KROE 930 and KID 590 "on the fly". Next I have to google which one is broadcasting ESPN Deportes Radio on 1310. Probably some bull\*\*\*t from the west.



Mika Mäkeläinen wearing a WIFE 1580 AM t-shirt

Monday, December 28

Jari: No morning Brazilians, no La Plata, no Mexicans and not even high quality Yankees. Quite boring all night and day long. Canadians and dominants are booming and it is hard to be "at the right time on the right frequency". Files of more than 150 GB should contain some highlights. NRD loggings: KBSU 730, KUGN 590, KDAL 610, KUBC 580.

The current outdoor temperature is only -15. And the indoor temp has finally reached +20. That's today's highlight so far. Yesterday evening it was -31 and, of course, I was without electricity for 3 hours (17-20 UTC). But now everything is under control, except that the conditions should be much more directional and interesting.

Tuesday, December 29

Mika: I got my gear running just before midnight UTC on Monday evening, when U.S. stations were audible all across the AM band. Soon conditions covered a wide area from Colombia and the Caribbean to the entire North America. WMCA New York NY on 570 kHz was one of the best catches of the night. North American stations continued to dominate the dial even late afternoon, when 930 KSDN and

1060 KGFX, both from South Dakota, were logged around their local sunrise. Otherwise there was little directionality in conditions at any point. The new X-band Canadian CJEU on 1670 kHz turned out to be an easy catch. The first Asian stations were noticed around 0930 UTC, but conditions remained mediocre, and spread over a huge area, so finding anything new is challenging. A bunch of the most common Philippine stations (such as 882, 1160.9 and 1314 kHz) were heard loud and stable. Overall, decent, but not super. The huge amount of recordings should however guarantee some nice surprises. Early evening I was happy to hear Radio Symban from Australia on 2368.5 kHz. The signal was relatively strong considering that conditions didn't really favor Australia. Afterwards I heard from the station that the transmitter power at the time of listening was 400 watts.

Wednesday, December 30

North American stations were heard all around the AM dial by 2200-2300 UTC, but unfortunately the usual suspects from Canada and the Upper Midwest tended to dominate the channels. Overnight catches included WEBC Duluth MN on 560 kHz. Signal strength was initially very good but weakened a bit in the wee hours. Hardly anything was heard from Latin America overnight, and even in the morning reception was sporadic. Only few Cubans were heard, but Radio Rebelde still hung around way past 1000 UTC on 1180 kHz. The best time for North America was around 1200-1500 UTC, when also graveyard channels were decent and many West Coast stations (notably 1290 KOUU) remained audible until 1600 UTC, past its local sunrise. One of the best catches was KLBS Los Banos CA on 1330 kHz. From the Eastern Hemisphere, the first Asians were noted after 0900 UTC. Initially many of the stations were from northern China, but gradually conditions covered too wide an area to make interesting catches - nevertheless, a better-than-average day for Chinese stations.



The leading daily Helsingin Sanomat did a large article "The decade of the wires" at new year - without a word about DXing.

Thursday, December 31

Our New Year's Eve began already around 2100 UTC on Wednesday evening, when stations from Atlantic Canada and the U.S. Northeast emerged from the noise. Our best catches include CFSX Stephenville NF on 870 kHz and WHJJ Providence RI on 920 kHz, which has become a fairly common station this season. Afterwards relatively poor conditions on the AM band drove me to shortwave, where Radio San Carlos from Costa Rica was a neat surprise on 2859.82 kHz (a second harmonic of 1430 kHz), heard the first time I ever even tried for it, although without a proper ID - which I got the following night. On the Latin front it was also nice to catch Radio Pachamama from Puno, Peru, on 849.90 kHz. In the morning reception to all directions was below the level of preceding days.

North America improved somewhat in the afternoon, and both KKIN Aitkin MN and KSDN Aberdeen SD were identified on 930 kHz. U.S. stations nearly vanished around 1400 UTC. A few Mexicans were heard around midday, including XEBBB Guadalajara JL on 1040 kHz. JOIF on 1413 kHz marked the beginning of the Asian influx already at 0840 UTC. The first Chinese stations were from the northern part of the country, including Liaoning PBS on 963 kHz, but later on typical pan-Asian conditions ensued.



Jari Ruohomäki with enough SDR-IQ and SDR-14 receivers to cover the entire AM band.

Friday, January 1, 2010

North American stations surfaced gradually around 2100-2200 UTC on Thursday evening, but signals remained weaker than on the previous night. No new stations were noted in real time, although it was interesting to see that KGOW

Bellaire TX had shifted from 1560 sharp to 1559.94 kHz. A few Brazilians and other Latin Americans were heard as well, but conditions remained below average. On a positive note, it was neat to hear the New Year being welcomed in different time zones around the world, and listen to ABBA's "Happy New Year" for umpteen times. After 1000 UTC U.S. stations came in full force from Coast to Coast, and many of them airing Coast to Coast AM. In the afternoon conditions improved on the upper half of the AM band, peaking at 1300-1400 UTC, with Mexicans joining the mix. One of the best catches on the Western front was KROE Sheridan WY on 930 kHz. Around midday we tentatively picked up Tahiti on 738 kHz and Tonga on 1017 kHz.

Saturday, January 2

The first trans-Atlantic signals appeared by 2100 UTC, but conditions were poor. WRRD Waukesha WI on 1510 kHz was identified by sheer luck, but otherwise nothing to listen to - except on the other side of the world, where Chinese stations came really well around their local sunrise. North American stations improved after 0100 UTC and grew stronger in the morning, continuing past 1400 UTC. Signal levels were good, but once again stations mixed from too large an area. There were nevertheless a couple of highlights, such as WRTO Chicago IL on 1200 kHz and WRWH Cleveland GA on 1350 kHz. Chinese stations blasted from 0900 UTC throughout the afternoon, and the number of Japanese stations was higher than on previous days. DZAS from the Philippines on 702 kHz was among the best catches heard in real time from Asia.

Sunday, January 3

North American signals appeared at the same time as before. Initially East Coast stations came fairly well, but signals didn't improve to the level of the previous night. Around 0300-0400 UTC there was a change in the nature of conditions. Unlike all previous nights, suddenly only U.S. West Coast stations were heard, although with rather weak signals. Daybreak was extremely poor to all directions. However, by midday U.S. stations emerged again, and instead of an overwhelming mess on each frequency, stations were often heard only one at a time. This would be a good recipe for surprises, but unfortunately regular Canadians tended to dominate the band also today. Asian stations became audible later than on previous days, but improved fast, and overall conditions to China were rather good, and there were more Japanese on the dial than on previous days.

There are lots of recorded IDs to be found. In the early evening we got our first taste of Alaska (aside from the regulars heard daily), and identified for example KMBQ in Palintown AK on 1430 kHz.



Monday, January 4

East Coast stations followed cheerleader WEGP (1390 kHz), but after a moderately good start, most of the night was lousy. Weak signals were heard here and there, with a slight emphasis on the Canadian Prairie and the Pacific Northwest by the morning. In the morning hours the AM band had the marks of some kind of magnetic disturbance: there was a strong hiss all across the band, and instead of the usual mix, few stations. However, this allowed the mumble of the graveyard frequencies to give way to decent



Our eco-friendly cabin boasts all modern amenities.

signals. For the first time during this DXpedition, local channels had readable signals already around 0700-0800 UTC. During the day conditions were confined to the Western half of North America. Alaskan and Hawaiian stations were louder than on any previous day, but we didn't find anything new. In the afternoon reception of stations from the West cooled around 1400 UTC, earlier than normally. Conditions to Asia were good. Stations faded in later and faded out sooner than normally, but signals were very strong, focusing again on China, with a very brief opening to Thailand just before Europeans finally took over the band.

Tuesday, January 5

Brazilian stations were the first to appear on the dial around 2130 UTC on Monday evening, followed a bit later by North Americans. The few North American stations that made more than a brief appearance were mostly from Minnesota and the Dakotas, and of course the Canadian Prairie, which have tended to dominate the frequencies during our DXpedition. Conditions to Latin America were similarly poor and sporadic, and overnight listening reminded me of typical conditions during less favorable parts of the solar cycle. However, in the morning at 0730-0800 UTC we got our first morning opening to Brazil and Argentina. This was modest compared to last year, but a start anyway. During the day North American stations were focused west of the Great Lakes, with Canadians typically dominating. However, graveyard channels were open, so we expect some nice surprises later on. Signals deteriorated rapidly after 1400 UTC. Asian stations emerged early and strong. There were even more Japanese than before (such as JOHG Kagoshima via Naze, Okinawa, on 792 kHz), but of course usually not during the few time slots when identifying NHK's local outlets would have been possible.



The sun almost rises above Menesjoki.

Wednesday, January 6

Trailblazer WEGP was heard after 2030 UTC, but only some Canadians appeared after 2100 UTC. Signals began to improve relatively late, around 2300 UTC, and included also U.S. stations, especially Upper Midwest. Right after midnight we got a nice opening to Venezuela and Puerto Rico, which continued to the morning when nothing much else was audible. Around daybreak we had excellent conditions to Venezuela and Colombia, lasting past 1000 UTC, which we had never

experienced before. After the Latinos lost steam, the U.S. East Coast came to the rescue, but in the afternoon conditions to North America were poorer than on any previous day, and the last signals faded away around 1400 UTC. From Asia it was Chinese, Chinese and then some more Chinese stations. I predict a stunning number of station identifications that need native help in interpretation.

Thursday, January 7

A few weak signals from North America emerged at East Coast sunset around 2100-2200 UTC and improved somewhat around midnight UTC. In general the night was very poor to all directions. Some Brazilian and Argentine stations were heard in the morning after 0700 UTC, until as long as 0830, when Radio Rio Cuarto on 1010 kHz from Argentina began its broadcast day. Reception from North America was miserable even during the daytime, and a bunch of stations emerged from the background noise level only when total darkness fell around 1330 UTC - so much like the solar maximum years. Asia on the contrary was again very good with loads of Chinese stations heard for hours. Also more Philippine stations than before, but at least in real time I didn't notice any personal new ones. DWXI dominated 1314 kHz most of the afternoon. So far the best station of the afternoon is HLCX Jeonju from Korea on 855 kHz.

Friday, January 8

Stations from Brazil, Venezuela and the East Coast of North America all began to make their way here at the same time, around 2200 UTC. However, conditions to all directions were poor, and so I decided to sleep most of the night, for a change. Some Latin Americans struggled to be heard in the morning, but North American stations were relatively strong for a couple of hours. Then signals remained barely above noise level for most of the afternoon, before a slight increase of Northwestern stations around 1330 UTC, and disappearing afterwards. Once again the Eastern front was much more interesting. Conditions to the Philippines were extremely good around 1030-1300 UTC, and although I already have almost 50 Philippine stations, I found at least a couple of new ones (DYEZ 684 kHz and DYSI 1323 kHz). Many Philippine stations are on split frequencies, which you can find later in the log. The Chinese were also very strong, and as conditions were more towards the Southern part of the country, I expect some nice surprises on recordings. European stations were remarkably strong all day, even midday local time.

Saturday, January 9

The last night began with Atlantic Canada, Ontario and some East Coast stations around 2100 UTC. North American signals improved a bit after 2300 UTC as the sun set from Minnesota to Alberta, indicating a very familiar focus of propagation. In the morning North America was strong, easily overwhelming Latin American stations. Before midday signals from Alberta and the Pacific Northwest were more powerful than I have ever heard before, and a lot of Alaskans were heard like local stations. Unfortunately after midday it was time to pull the plug, and head home.

The LEM288 crew, Jussi Suokas and Jopi Nyman, arrived after 1000 UTC on Saturday. I briefed them on the conditions and packed my stuff. For the first time I

did some DXing even during the return trip. I enjoyed Jari's hospitality - including a hot enough sauna - at his summer cottage in Muhos, where I stayed overnight and recorded some 1.5 hours of Perseus files at sunrise. It was great to be able to divide the return trip into two days, as I was really tired from all the DXing.

I finally made it home early Sunday evening, after driving a total of 2520 kilometers (1566 miles), back and forth between Vantaa and Lapland. But I plan to be back in Lemmenjoki in eight weeks time for a third round, which would make this season a personal record of northern exposure.  
Enero 11, 2209.



## ACTIVACIÓN DE COMUNA ANTÁRTICA CHILENA

### *ultimo minuto*

Debido a la nave de transporte de coordinación llegaremos a la estación ANATARTICA, Base Prat, el 10 de febrero, por lo que esperamos **estar en el aire el 12 de febrero.**

Sin embargo, estaremos en la radio hasta el final de marzo.

Pedimos disculpas por la demora, pero todos sabemos que lo único que no podíamos controlar, era el horario del transporte de la Marina.



Estimados Amigos, (as),

Les recuerdo que a partir del próximo martes 12 de Febrero debemos estar atentos a la Activación de la comuna Antártica, código para el Concurso comunas Zona 12 de FEDERACHI: "120402" y "IOTA: AN 010" dos importantes QSO para estos diplomas.

## XR9JA – GREENWICH ISLANDS, AN-010

Frecuencias de Activación sugeridas en SSB, CW, PSK31, y Satélite AO-51

BAND	SSB	CW
10	28.475	28.024
12	24.995	24.894
15	21.295	21.024
17	18.145	18.074
20	14.200	14.024
40	7.078	7.004
80	3.780	3.504

73 y Buenos DX Amigos y Amigas,  
**Héctor Frías. J. , CE3FZL, FEDERACHI**

### SEGUNDO FARO CHILENO PARA EL "FIN DE SEMANA DE FAROS SUDAMERICANOS" 2010.

El FARO PENINSULA LOS MOLLES (CHI-022), será activado por un equipo del RADIO CLUB CARABINEROS DE CHILE (CE3ETE), en la segunda edición del FIN DE SEMANA DE LOS FAROS SUDAMERICANOS.

Este evento auspiciado por la ARLHS y organizado por el GRUPO DX BAHIA BLANCA DE ARGENTINA, LA FEDERACION DE RADIO CLUBES DE CHILE (FEDERACHI), EL RADIO CLUB PERUANO Y EL RADIO CLUB URUGUAYO, tendrá lugar entre el viernes 26 y el domingo 28 de febrero.

El faro se encuentra en Quintero, V Región (32° 46' 06" S - 71° 32' 00" W), fue inaugurado en 1944 y tiene una altura de 18 metros.

La expedición utilizará un PREFIJO ESPECIAL que actualmente se encuentra en trámite. Visitar [www.grupodxbb.com.ar](http://www.grupodxbb.com.ar) y entrar debajo del icono que dice Faros 2010.



Atte,

Carlos Almiron LU7DSY  
Representante ARLHS  
para Sudamérica

Héctor Frías CE3FZL  
Manager Diploma Faros Chilenos  
FEDERACHI



## NOTICIAS DESDE SUECIA: ¿SUSPENSIÓN DE ENVÍO DE QSL?

Nos informan desde Radio Sweden, que por el masivo uso de internet, no se emitirán planillas con los esquemas de transmisión impresos, ni tarjetas QSL, por lo que las informaciones de las transmisiones, solo se podrán obtener desde el sitio en internet. Esta medida entró en vigencia desde octubre del año pasado. El departamento de radioescuchas de la mencionada emisora, solo en casos especiales enviará los esquemas de transmisión impresos para los servicios exteriores.

**Traducción:** Patricio De los Ríos, CA6UQT  
**Fuente:** Héctor Frías J, CE3FZL

# QSL RECIBIDAS

## Radio Rumania Internacional

Fecha de escucha: 21 de octubre de 2009

Programa escuchado en ruso en los 11845 khz entre las 1345 y 1400 UTC, grabado en formato MP3 y enviado al correo electrónico de la radioemisora. La QSL fue recibida el 19 de enero y demoró 75 días en llegar. Lamentablemente la tarjeta no indica detalles del informe de recepción

Patricio De los Ríos, CA6UQT

RADIO ROMANIA INTERNATIONAL  
BUCHAREST

**QSL**

*This confirms your report of*  
21.10.2009 *concerning our*  
*transmission at ..... UTC*  
*on ..... kHz.*

*Your remarks are of great*  
*interest to us and your further*  
*reports will be much appreciated.*  
73's

Braun F56 -GW, Germany, 1942

Photo: Mirel TOMA



*Sr. Patricio de*  
*Los Rios*

www.radi.ro

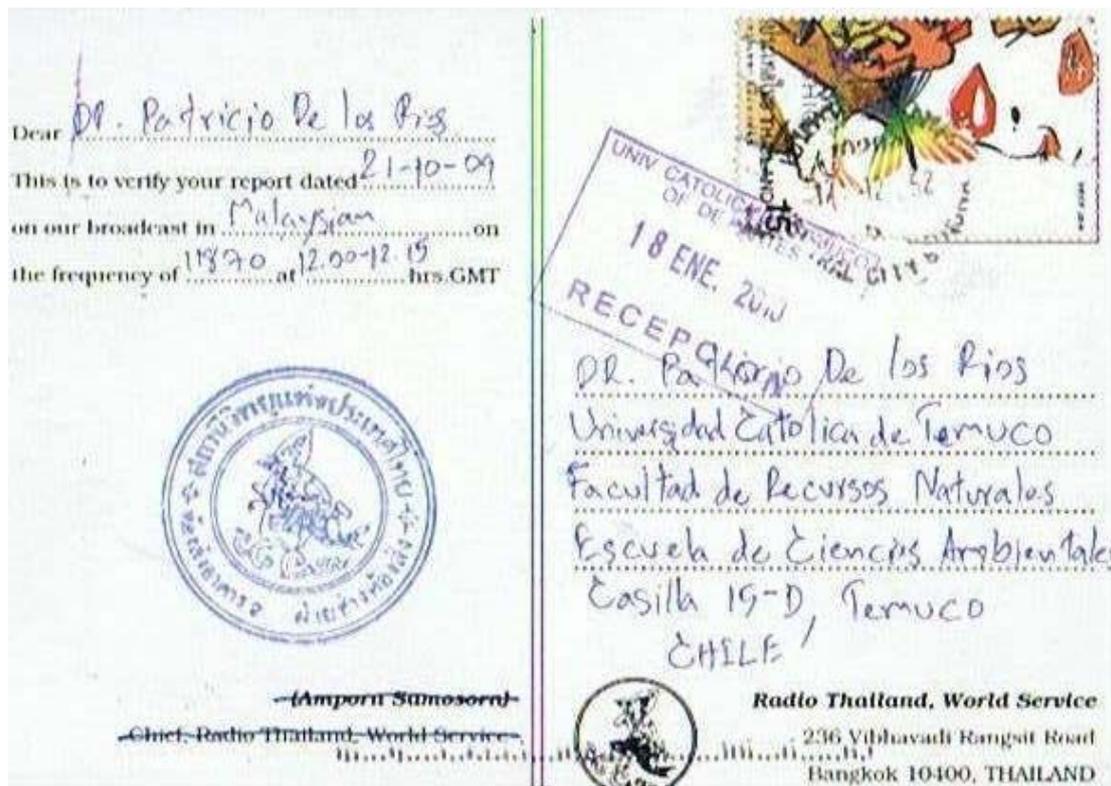


## QSL DE RADIO RUMANIA INTERNACIONAL

## Radio Tailandia Internacional:

Fecha de escucha: 21 de octubre de 2009

Programa escuchado en malayo, en los 11870 khz, entre las 1200 y 1215 UTC, grabado en formato MP3 y enviado al correo electrónico de la radioemisora. La QSL fue recibida el 19 de enero y demoró 90 días en llegar.



# QSL RADIO THAILAND WORLD SERVICE

**Broadcast Schedule**

GMT	Service
20.00 - 01.00	English
31.00 - 02.00	Thai
20.00 - 03.30	English
20.30 - 04.30	Thai
11.00 - 11.15	Vietnamese
11.15 - 11.30	Khmer
11.30 - 11.45	Lao
11.45 - 12.00	Burmese
12.00 - 12.15	Bahasa Malaysia
12.15 - 12.30	English Malaysia
13.00 - 13.15	Japanese
13.15 - 13.30	Mandarin
13.30 - 14.00	Thai
18.00 - 19.00	Thai

Her Majesty Queen Sirikit of Thailand's portrait is depicted in the earthenware mask by craftsmen in the SUPPORT Foundation.

Broadcasting at the frequencies of 4830, 5020, 6045, 6185, 7140, 7205, 7215, 7225, 7235, 7245, 7255, 7285, 7295, 8510, 9530, 9535, 9540, 9555, 9615, 9635, 9640, 9645, 9655, 9685, 9690, 9705, 11725, 11735, 11755, 11780, 11805, 11820, 11885, 11905, 11920, 15265, 15370, 15430, and 15445 kilohertz in accordance with required time, target areas and weather conditions.

## **DECLARACIÓN DE LA COMISIÓN DE RADIOESCUCHAS POR CIERRE DEL PROGRAMA CLIUB DE AMIGOS Y AVENTURA DIEXISTA DE HCJB**

A nombre de la comisión de Radioescuchas de FEDERACHI, lamentamos la desaparición de este gran programa DX, con el cual compartimos grandes experiencias y amigos con los cuales nos conectamos en trono este lindo pasatiempo, científico recreativo.

Deseamos agradecer la oportunidad de dar conocer como es el Diexismo y la Radioescucha en Chile, y al mismo tiempo pedimos se re-evalúe la situación del DX desde HCJB para salir en otro momento al aire desde Ecuador o desde otro medio audiovisual, pero no dejar al mundo latinoamericano sin la visión Ecuatoriana de este noble hobbie.



Uds. serán recordados entre los diexistas Chilenos e internacionales por el aporte técnico, la comunicación entre clubes y organizaciones y dejan un legado de audio invaluable del cual nos sentimos en la parte final muy participes. Saludos amigos Allen y Carlos, Saludos a los colaboradores habituales de Aventura Diexista, Saludos amigos Radioescuchas del mundo, Desde Chile, cordiales 73 y buenos DX

**Patricio de los Ríos – CA6UQT**  
Jefe Comisión de Radioescuchas  
FEDERACHI

**Héctor Frías J. -CE3FZL**  
Relaciones Públicas

**HASTA LA PRÓXIMA EDICIÓN  
73 Y BUENOS DX**

### **COLABORADORES Y FUENTES**

HÉCTOR FRIAS, SANTIAGO DE CHILE  
HUGO LÓPEZ, SANTIAGO DE CHILE  
PATRICIO DE LOS RIOS, TEMUCO



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