

# SHORTWAVE BULLETIN

Redaktör: AHK, Anders Hultqvist, Hölövägen 11, 125 40 Älvsjö. Tel 08-647 64 19. Fax 08-749 23 80. Internet:ahk@public.se  
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**J**ubileum! Detta är SWB nr 1300. Hur gick det på Nor-DX-95? Kunde ni höra de "hemliga" Bangkok Radio och Premier Radio? Det hade smakat fågel med BFBS Gibraltar, som JOE hade på gång, men som inte blev av tyvärr. Nu finns både Lowe 250 och Drake R8A ute på marknaden. Lowe 250 har testats i England. Testrapporten bifogas detta nummer. Konstig testrapport tycker testkansliet här på redaktionen. Killen som rattat den nya rx-en har ju mest funderat över utseendet och andra detaljer som har föga värde för DX-are i praktiken, när det verkligen gäller.

**Kenneth Olofsson** meddelar ny adress: Elleholmsvägen 276, 375 91 Mörrum.

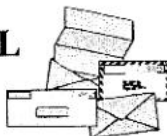
**Henry Bergström** berättar om Radio Horizonte, men inte den i Chiclayo, ej heller den i Chachapoyas - utan om den som ligger i Södertälje på 88,4 Mhz! "Fantastiskt fin musik, härlig LA-stil på programmet och framför allt: Q5. Verkar produceras av en chilensare, så det blir en del eldiga quecas men även annan fin LA-musik står på programmet, förutom reklam för LA-resor, intervjuer, comunicados mm - allt i bästa LA-stil. De SWB-are som bor i Stockholmsområdet (eller FM-dx-ar) har här en fantastisk språkkurs). Bästa programmet vid den här tiden på lördagar fram till cd 13.00 (UTC) men man sänder hela förmiddagen till en början under namnet R Amanda. Sändningar även andra veckodagar, ibland kvällstid. Ett av stationens ID med tillhörande jingle utförs av ett litet barn - helt underbart!"

**Björn Fransson** undrar hur det står till med Nisses tumme! Redaktörens tummar är i fin form i alla fall. "AHK! SWB nr 1299: Här har väl den gode NJ (eller du?) bitit sig i tummen på 7255 kHz? Den nya skulle ju starta på 7355 och något annat har inte rapporterats, mig veterligt. Menar han 7355, så är det en ryss som ligger över. På frekvensen finns dock, enl WRTH, ett antal andra religiösa stationer att välja på när det gäller gissningar om vad den OID:a bakom ryssen kan vara, KNLS, WRNO, Vatikanen och WYFR."

Även vår man i Lysekil - **Björn Malm**, där luften är lättare att andas, har grubblat över Nisses loggning på 7255, men av en annan orsak! "NJ hade i förra bullen en OID station på 7255 kHz där han i sin tipskommentar bl.a. skrev: "...Det finns religiös rap, så..." Jag kan faktiskt inte låta bli att berätta följande lilla historia, som lär vara sann. En av mina tidigare studiekamrater på KomVux, vi läste den spanska nybörjarkursen "Este País" tillsammans, en invandrad östtysk tjej besökte något år tidigare México. Under en fotvandring genom otillgängliga djungelområden besöktes en mindre indianby där det fanns en liten träkyrka. När hon tittade in i kyrkan fick hon sitt livs chock. På det jordstampade golvet, det fanns inga bänkar, satt en del av byns innevånare och halsade Coca-Cola! Hon berättade för mig att anledningen till detta besynnerliga beteende, minst sagt, var att dom genom att rapa försökte driva ut onda andar. Att NJ menade religiös rap-musik har väl alla förstått." Björn grubblar vidare: "Från Coca-Cola över till starkare grejer. Under min Guatemala-vistelse besökte jag en liten indiankyrka i San Pedro, som ligger strax utan för Antigua (det finns även ett San Pedro vid stranden av Atitlánsjön). Kyrkan heter "Capilla San Simón" och var öppen alla dagar mellan 06-18. På gårdsplanen utanför gör indianerna upp små eldar där dom sitter en stund mediterande och tagande sig ett "jäm" - om det är rom eller tequila vet jag inte, men lovar att göra ett praktiskt prov under nästa resa! Därefter går, en del vacklar, indianen in i Capilla "San Simón" där 100-tals levande ljus i olika färger brinner. Varje färg representerar ett "bekymmer", dödsfall, otrohet osv. Ju fler bekymmer - mer tequila troligen. Säkert finns det en färg även för lyckliga tilldragelser. Det skulle vara hemskt kul om HK, som har mycket stora kunskaper i Latin-amerika kunde berätta lite om detta! Kan det veckligen stämma? Skål!/BM."

**Olle Alm** är nu i Abisko sedan förra helgen, och fram till slutet av oktober, och han hoppas kunna hitta något trevligt att meddela till SWB för att bättra på den magra bidragsstatistiken. Olle skriver: "Jag beundrar de tappra som gräver fram många fantastiska LA-loggningar på kortvägen, men jag kan inte förmå mig att själv jobba med LA nu för tiden. Dåligt läge och besvärliga lokala störningar samt den blygsamma svarsprocenten är viktiga orsaker, men jag har också rent allmänt tappat intresset för LA"

QSL



Birgen Norgren chockar redaktionen med ett par mycket speciella QSL. Kanske dags att gå igenom rapporterna från 1967...

**Arnstein Bue** <arb@iselin.icl.no>: Ingen loggning denna gång, men LA-QSL nr. 250 er endelig i havn: R Nacional del Peru 6095 b 3u, v/s Henry Aragon Ibarra, Gerente

**Dan Olsson**: R Loyola-5955 brev, vimpel; RAI/Caltanissetta-6060 kort; Radio Esperanza-6090 kort och turistinfo; Reflection Europe/Waves of Glory-6295 brev, broschyr, frimärken, visitkort

**Thord Knutsson:** AIR Thiruvanthapuram-5010 kort från Delhi efter direkt-rpt och AWR Rimavska Sobota-6055 kort, brev, vimpel, mm.

**Birger Norgren:** R Clube de Rondoopolis-2480 brev, vykort, mynt, info, visitkort. Efter 15 år!! (Ingen follow-up alltså). Har dom haft storstädning. V/s Canário Silva; R La Crónica-9520 brev, v/s Henry Aragon Ibarra, som tyckte det var roligt att få brev från Sverige igen. Breven upphörde sedan de stängt KV-sändaren, konstaterade han... (Tror jag det. Även om dom väl teoretiskt borde gå att höra även på MV...); R Luz y Sonido-6473 brev, vykort. V/s María Milagros.

## LOGGEN - ALL TIMES ARE UTC

3300	1.9	0330	R Cultural m EE-px, Q3	BiN
3325	8.9	2200	RRI Palangkaraya var det väl som hade nyheter, när jag kollade om Nigeria hördes. S2-3	BEFF
3334	5.9	0320	TWR Swaziland nu här (ny!) med religiöst och c/d 0330. S2-3 och en massa CWQRM.	BEFF
4003.2	12.9	1621	RRI Padang med lokala nyheter på halvtimmen. Q4	TG, GW, LSD
4746,8	5.9	2300	R Huanta 2000 dyker oftast upp vid hyfsade Peru-konds. Q2-3	HBG
4760	26.8	-1730	AIR Port Blair stängde för dagen Q3	TG
4760	26.8	2020	ELWA Svag och störd Q1-2	TG
4760	13.9	0100-	AIR Leh öppnade redan denna tid, öppnade tidigare 0215	OAA
4765,9	10.9	1630	RRI Medan Q4	LSD, GW
4780	30.8	0245	R Oriental med ölreklam och musik av Los Paramidos	BiN
4781,3	9.9	0330	R Satélite tillbaks igen här med fina ID:n mellan varje platta. 2-3	NJ
4795	8.9	0430	OID Brasil. QSA2/3	TBV
4845	27.8	1552	RTM R6 körde över denna kväll? Fortsatte i alla fall långt efter 16 UTC. Q3	TG
4845	29.8	0100	R Cultura, Manaus 99% sikker - hörer Radio ..... Manaus, Amazonia, Brasil". QSA2/3	TBV
4865	30.8	0340	R Sentinel da Amazonia med Q3 och något slags diskussionsprogram	BiN
4885	11.9	0537	Ondas del Meta, Villavicencio ID-ade snabbt och spelade rumba. S2-3	BEFF
4887	3.9	0245	R Villa Rica med Q3 och tangopx	TBV, BiN
4910,4	12.9	1610	RRI Bukittinggi hördes i Göteborg en dag då det var bra konds mot Indonesien	GW
4925	1.9	1649	RRI Jambi med latrepad västerländsk musik och bra styrka.	TG
4935	31.8	0410	R Capixaba med Q3	BiN
4965	1.9	1915	Christian Voice ned programmet "Simple Truth" Q3	TG, DO
5003,5	8.9	-0000	OID med non-stop musik och "pirat-sound". Inget tal hördes. Stängde med någon minuts marschmusik. Ekvatorial-Guinea? 2	NJ
5005	27.8	1611	R. Nepal. Ja det var inget fel på styrkan i alla fall... Men programmet! Hur ska man få rpt på den här? Q4	TG
5005,2	10.9	2235	OID svag station hörd här några kvällar. R Jaén hördes här vid mitt besök i norra Peru, men aldrig efter 2210 UTC. Men man har väl utökat sändningstiden. Verkar nu stänga runt 23.	HBG
5014,7	21.8	2240	Estación Tarapoto kom fram ganska svagt med rel. px samt några reklamer. Försvann eller close down 2305. Hördes som Radio Moyobamba för ca 10 år sedan. Inget svar då, kanske bättre tur nu. Styrkan ca 2:a	KO
5019	9.9	0500	LV du Sahel har halkat ned 1 kHz. 2	TG
5046,4	12.9	1605	RRI Yogyakarta	GW
5069,1	3.9	0215	Ondas del Sur Oriente QSA2 + QRM	TBV
5083,9	5.9	2240	OID som ju visade sig vara Radio Mundo	KO, HBG
5770	27.8	2326	R. Miskut? De enda id som jag hörde var R. Nicaragua. Få se om bandmanglingen ger några ledtrådar. SS och prat om Nicaragua.	TG
6018	11.9	0547	Radio Victoria med religiöst och stort ID. S2-3	BEFF
6029,7	2.9	2331	R. Santa Maria med fotboll. Första gången den här säsongen Jag har hört dem med repbara styrkor. Q2.	TG
6471,6	5.9	2315	R Luz y Sonido med Q2	HBG
7115	9.9	1400	R Thailand med EE-musik. Ej ID, men språket kändes som det mjuka Thai. S2-3 och QRM de siffertanten	BEFF
7117	9.9	1400	(Tent) Laos. Kvinna med asiatiskt språk, som jag inte får till annat än Laos! Ej ID. S2	BEFF
7120	10.9	0705	Libyen. Flera stationer här. Troligen är de ena Tripoli 2, som rapporterats, men det fanns också en OID engelsktalande. S2	BEFF
7147	4.9	1750	OID Clandestine med non-stop arabisk musik bör vara Voice of Palestine via en Algiersändare. OID tills vidare. Ton-QRM och S2	BEFF
7170	3.9	1350	R Singapore. Gamla R Singapores program här heter visst "Olikkalanjam" via Jurong-sändaren. Tamil-språk och nyheter 1400. S2-3 och en massa åska	BEFF
7200	9.9	1400	R Beograd med reklam för Novi Sad. S4	BEFF
7530	27.8	1929	R. Ulan Bator med sitt ee program. Q2-3	TG
13830	9.9	1400	Hrvatski Radio med sång och ID. S4	BEFF
15244.1	26.8	1743	La voix du Zaire, Kinshasa med långgrandigt prat på ff och inhemska musik. Q2	TG

## INFO DESK

### Brasilien

4915,5 SWB 1298 Brasssen som OVE rapporterade som OID är CBN Anhanguera i Goiania. Deras MV-frekvens 1230 rapporteras hörd i Brasilien med detta ID/TK

### Bolivia

DTG, dvs departementet har sänt en lista över alla lagliga stationer i landet på MV, KV och FM. Listan visar vad vi redan vet, att ca hälften av alla stationer på MV och KV sänder utan tillstånd. Men man listar också ett antal stationer som kanske kan vara värda att titta efter, t.ex.;

3375 R Nuevo Mundo, Sucre 1kW  
4760 R Bolivia, Oruro 5 kW  
4975 R Maria Auxiliadora, Montero 1 kW  
5025 R Litoral, Cochabamba 1 kW  
5055 R San Rafael, Cochabamba 1kW  
9660 ABC Noticias, Santa Cruz 1 kW  
/TK

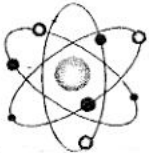
### Paraguay

Radio ZP30 La Voz del Chaco Paraguayo (610) planerar KV. Frekvens anges ej, men blir nog verklighet. /TK

### Uruguay

Em Ciudad de Montevideo (1370) har tillstånd för 9650 med 10 kw och 15230 med 125 kW och planerar starta "inom kort"./TK

SPACE WEATHER OUTLOOK SEPTEMBER 18-20 FROM SPACE ENVIRONMENT LABORATORY  
SOLAR ACTIVITY IS EXPECTED TO BE VERY LOW. THE GEOMAGNETIC FIELD IS EXPECTED TO BE QUIET TO UNSETTLED FOR THE NEXT THREE DAYS.



A-och SF-värden kommer väl någon gång. Jag har inte hittat någon bra källa för den informationen ännu. Hjälp!!!

### FORECAST OF SOLAR AND GEOMAGNETIC ACTIVITY 13 SEPTEMBER 1995 - 09 OCTOBER 1995

SOLAR ACTIVITY IS EXPECTED TO BE VERY LOW. A PROTON ENHANCEMENT IS UNLIKELY AT SATELLITE ALTITUDES. THE GREATER THAN 2 MEV ELECTRON FLUX IS EXPECTED TO REACH HIGH LEVELS ON 4 OCTOBER AND REMAIN ELEVATED FOR THE REMAINDER OF THE PERIOD. THE GEOMAGNETIC FIELD IS EXPECTED TO BE MOSTLY UNSETTLED THROUGH 26 SEPTEMBER, ALTHOUGH ACTIVE PERIODS MAY OCCUR ON 14 - 15 SEPTEMBER DUE TO POSSIBLE CORONAL HOLE EFFECTS. MOSTLY QUIET CONDITIONS ARE EXPECTED DURING 27 SEPTEMBER - 01 OCTOBER. RECURRENT CORONAL HOLE EFFECTS ARE EXPECTED TO COMMENCE 02 OCTOBER AND PERSIST THROUGH 05 OCTOBER. ACTIVE TO MINOR STORM LEVELS ARE EXPECTED DURING THIS TIME WITH BRIEF PERIODS OF MAJOR STORM LEVELS POSSIBLE, PARTICULARLY AT HIGH LATITUDES. A DECREASING TREND IS EXPECTED TO BEGIN 06 OCTOBER.

### Seattle, WA September 8, 1995 SB PROP ARL ARLP038 ARLP038 Propagation de KT7H (igen rapport till den här helgen tyvärr/AHK)

Solar activity was off a bit over the past week, with the average solar flux down about five points from the week before, and average sunspot numbers down by over 26. Geomagnetic activity was mostly low, but there was a big increase in activity over the past few days caused by a recurring coronal hole. The K index rose as high as six, which indicates very disturbed conditions with dramatic absorption of HF radio signals. Look for another peak in disturbed conditions around September 10, and continued low solar flux. Flux values should rise slightly and peak in the mid to high seventies around September 22. Coronal holes, which are mentioned frequently in this bulletin are areas in the coronal layer of the Sun through which an unrestricted flow of high energy particles passes into space. When the earth moves through one of these streams, the geomagnetic field is disturbed and the ionosphere is neutralized by protons. Coronal hole activity tends to occur more during the downward trend and at the bottom of a solar cycle, which is where we are right now.

Sunspot Numbers for August 31 through September 6 were 18, 13, 11, 11, 23, 11 and 11, with a mean of 14. 10.7 cm flux was 75.6, 73.7, 73.3, 73.6, 74.4, 74.6 and 71.8, with a mean of 73.9. NNNN /EX

From: "Chuck Rippel" <crippel@exis.net>

The R8A arrived today all ok

I thought you guys might want a few initial impressions. I have done a few hours of DX'ing tonight on the Tropicals. I have a friends R8 in the shack and a coax switch to swap antennas so I can use the same for both receivers. First off, the noise floor on the R8A is at least 3 db down from the R8 and perhaps maybe 5 db. I haven't actually measured it with test equipment but maybe this weekend. The R8A has very much improved audio recovery. Much better than the R8 and it may directly rival my Lowe Europa. I could hear enunciated speaking out AIR Thirmpuham on 5.010. While there was audio coming from the R8, there was not nearly the definition as the '8A. The sync control works much better and the manual clarifies it's use. The rate of tuning is a little faster, about 25%, than the R8. I like the rate of the R8 myself. Of course, the elimination of the confounded clumsy mode and bandwidth controls is wonderful! You can go back and forth between any band, any mode to your hearts content.

Chuck Rippel  
crippel@exis.net

From: hermod@sds.se (Hermod Pedersen)

Subject: Re: Tropical Bands & Foreign MW Loggings

Tänkte att detta kanske kunde vara av intresse, främst då indoneserna. Annars inte mycket att rapportera eftersom annat gått före DX. Har dock provisoriskt slängt upp en T2FD, som man väl kan testa under NM (så att man har nåt kul att pyssla med bland alla stömingar). /Hermod

In rec.radio.shortwave, gatkins@gatkins.seanet.com (Guy Atkins) wrote:

TROPICAL BANDS:

AUSTRALIA: 2310, 1410-1415, VL8A Alice Springs. Nice S-5 to S-6 level, //2325 and 2485 (both weaker) with pop music and listener call-in program. (Atkins 9/10)

INDONESIA: 3222.8, 1417-1420, RRI Mataram with talk and ID at 1417. Good. (Atkins 9/10)

3304.8, 1422-1426, RRI Dili. Indo-lang. version of old US C&W music at 1422. Good level, but fading. (Atkins 9/10)

3325, 1428-1434, RRI Palangkaraya. M & W talk and ID or mentions of Palangkaraya at 1430. Good level at t/in, but starting to fade at 1434 (1 hour past local SR). (Atkins 9/10)

3344.5, 1435-1437, RRI Ternate. Down from nominal 3345. Indo ballad or EZL music, M in Indo. (Atkins 9/10)

3384.9, 1439-1444, RRI Kupang. Fair signal with enjoyable Indo ballad; advertisement with childrens voices and nursery music. No sign of typically weaker RTM Miri on 3385, leaving Kupang in the clear. (Atkins 9/10)

3976.1, 1450-1500, RRI Pontianak. Still going strong nearly 1-1/2 hours past local SR. Soft music to 1458 ID and announcements; SCI to 1500 Jakarta relay. Very little ham QRM since all of the continental USA is in sunlight at this time. On coastal DXpeditions with Beverage antennas, Pontianak occasionally is heard with audio (weakly!) more than 2-1/2 hours past SR. Atkins 9/10)

4003.2(p), 1310-1318, RRI Padang. Presumed, with funky 1970s soul music. At 1358- 1407 recheck, music continued over top-of-hour and into Indo talk with no ID heard. Fair-good signal. (Atkins 9/10)

LESOTHO: 4800, 1440-1505, LNBS Maseru. M with possible religious tk in Sesotho lang. Stevie Wonder music at 1445; advertisement or announcement at 1554 with mentions of Africa. Sports report 1455 with excited soccer or rugby announcer. At 1500, 6 time pips heard in the background of sports broadcast but no ID at top-of-hour. Signal peaked rapidly to good level at 1450 but faded to poor by 1505 (1-1/2 hours past local SR, 1 hour before Maseru SS). Best reception on Indo/PNG mini-Beverage antenna. Lesotho continues to be heard here earlier than usual on the AM longpath, but no other Africans have been heard this season on LP. (Atkins 9/3)

MALAYSIA: 4895, 1445-1447, RTM Kuching. Sarawak. Koranic recitations //5005 RTM Sibul. Green Network program. Fair-good signal. (Atkins 9/10)

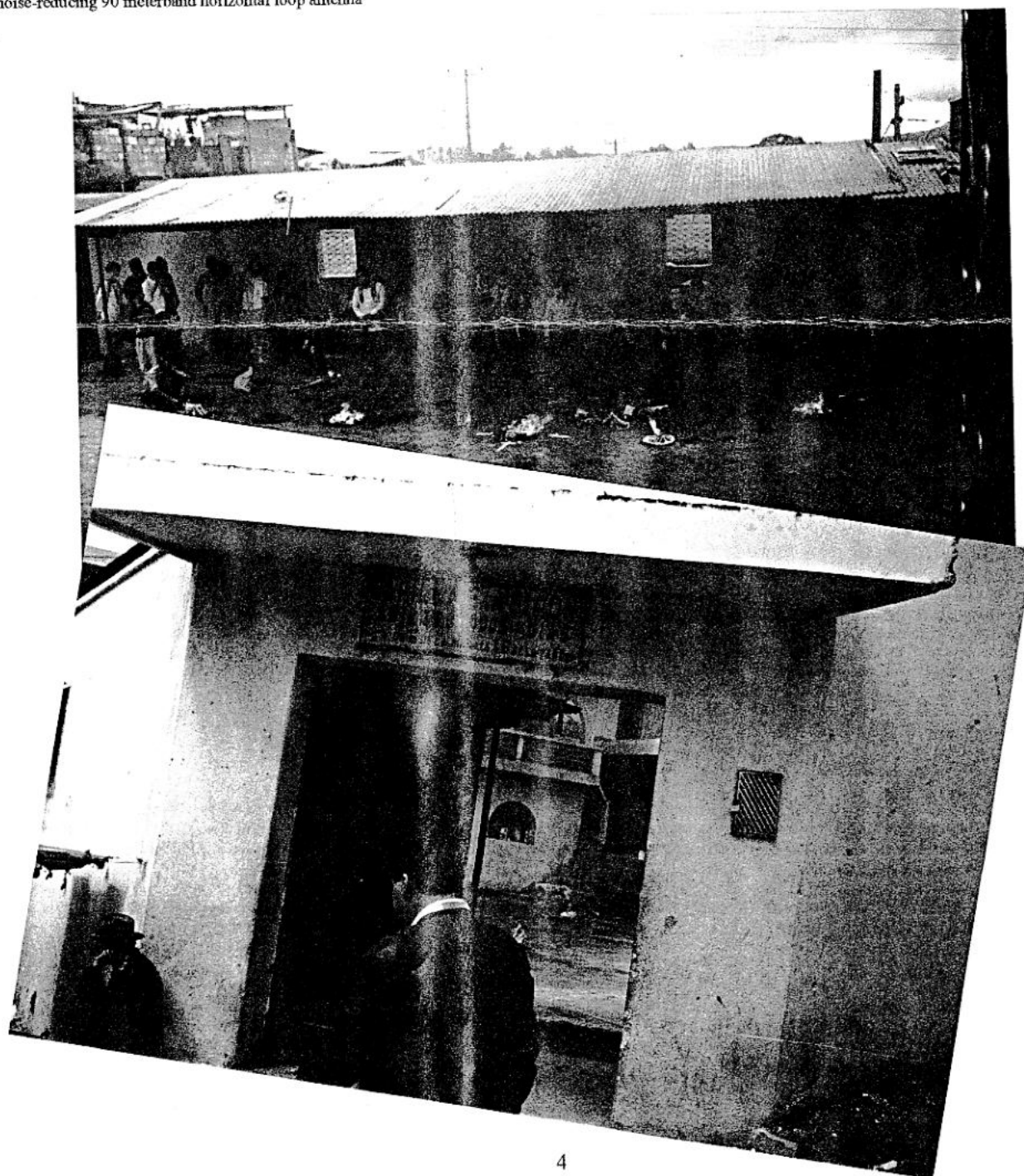
NAMIBIA: 3270(p), 0415-0420, NBC. Presumed this one with nice signal of Afro-pops music.

3270/Namibia not often heard this clearly here. (Atkins 9/10)

QTH: Bonney Lake, Washington USA

RECEIVERS: Lowe HF-225E Europa; Drake R-7

ANTENNAS: 350 ft. terminated, matched mini-Beverage (oriented Indo/PNG); Carolina Beam; noise-reducing 90 meterband horizontal loop antenna



CAPILLA SAN SIMON I SAN PEDRO. INNE I KYRKAN  
FINNS EN JÄTTESTOR TRÄSKULTUR, FÖRESTÄLLANDE  
"SAN SIMON" - FÖREMÅLET FÖR INDIANERNAS DYRKAN

# Lowe HF-250 Communications Receiver

Brand new and hot off the production line is the all new Lowe HF-250. Mike Richards is the first reviewer in the world to get his hands on this latest offering from this British receiver manufacturer.



The Lowe HF-250 is the latest in a fine breed of receivers from this famous manufacturer and is bound to cause quite a stir. Over recent years Lowe's have established themselves as a champion of British design and achieved wide success through a range of well built high performance products. The HF-250 represents a change in so much that it is now in direct price competition with many of the Japanese mainstream receivers. One of the most significant changes in this model is the styling. As can be seen from the photographs, the new model boasts very sleek curving lines that should increase its appeal considerably. These improved looks have been achieved without losing the individual style for which Lowe Electronics have become famous. In addition to the obvious aesthetic changes, the HF-250 boasts a wide range of enhanced features that make it a formidable contender in this very competitive market.

## Layout

One of the striking features of the new design is the sleek black anodised brushed aluminium front panel and the clarity of the panel markings. The simple use of white on black is very effective both in terms of styling and practicality. When using the HF-250 for late night DXing the clear panel markings are a great boon. The main display

illumination was also very well balanced for all lighting conditions. Besides the main display, the front panel was dominated by the main tuning knob. This knob had a wonderfully silky feel and was very free moving. The remaining operational functions were set using press buttons. These all had a very positive feel with a click to confirm operation. In addition to the main display, there was a bank of I.e.d.s used to show the mode and memory status. On the HF-250's top panel was an ingenious cut-away handle that I hope you can see from the photographs. Not only was this a good carrying handle but also provided the vent for the internal speaker. Moving on to the rear panel, there was a good selection of antenna connection options. Antennas catered for are 600Ω wire, 50Ω coaxial feeders and a whip for portable operation. Each option was selected using a three-way slide switch on the rear panel. The WA-250 whip option was particularly useful for portable operation as it includes a built-in antenna pre-amp to provide the correct high impedance match for a whip antenna. In addition to the versatile antenna connections, the HF-250 featured the now standard record and external speaker outputs. These both used 3.5mm jacks and the speaker jack included switching to disable the internal speaker. The output level from the record jack was around 350-400mV from a 5kΩ source

impedance so should prove fine for most ancillary equipment such as data decoders and external d.s.p. filters. The speaker output boasted a healthy 1.6W into an 8Ω load but you could also use 4Ω speakers without any problems. Power was supplied via a standard coaxial socket also on the rear panel and the HF-250 needed a nominal 12V at 500mA. This is normally provided by the supplied 240V a.c. external power unit but could of course also be met using any other 12V d.c. source. If you wanted to use the HF-250 as part of a transmitting set-up there was a mute connection adjacent to the antenna sockets. This mute used the normal convention, i.e. ground to mute. The only remaining connection on the rear panel was 9-pin D-type connector for the remote control link to a computer. This serial port featured standard RS-232 levels, so can be connected directly to your computer's serial port without having to buy an expensive level converter.

## Remote Control

One of the very new features of the HF-250 is the provision of an optional full function remote control unit. The controller looks just like any other TV/hi-fi remote control, but gives access to virtually all the HF-250's features and adds a couple more. The only irritating omission was the lack of a volume adjustment. The

handset included the usual up and down buttons for frequency and mode adjustment and this was supplemented by a MHz button. This increased the frequency in 1MHz steps with a loop around at 30MHz. To help with the quick selection of a band, the MHz button included an auto repeat so you could hold the button depressed and just release when the required frequency is reached. The new features added with the remote control were mute and standby and most importantly, direct frequency entry. The mute did just that and suppressed the audio output with a toggle action. The direct frequency entry was a very welcome addition. Pressing the numbers on the keypad caused the display to build-up the required frequency. For frequencies above 3MHz the receiver switched to the entered frequency as soon as the final digit was entered. When entering lower frequencies you has to press the Enter button to let the receiver know you had finished entry. One point to note with this operation is that you could only enter frequencies in kHz despite the display indicating frequency to 100Hz. Power for the remote control unit was via two AAA cells mounted in the rear of the handset.

## Smart Tuning

Lowe have put a lot of development effort into making the manual tuning feel right.



marked the panel I probably would have complained that the panel was too cluttered!

## Operating Manuals

Lowe have addressed the problem of combining help for newcomers with detailed operating instructions by providing two books - an operating manual and a listeners guide. The main operating manual sticks very much to the point and sequentially describes the receiver's functions and how best to operate them. This was supplemented by detailed, but very small circuit diagrams, and a basic circuit description. I was a little disappointed with the overall quality of the manual and would like to have seen better print and binding quality with a few more illustrations to explain some of the operations. The *Lowe Listeners Guide* is very well known and provides a useful introduction to all aspects of listening.

## Using The HF-250

For the review I tried the HF-250 in a number of different locations with a wide variety of signal types. For the base stations tests I used the receiver with a random wire antenna fitted with a MLB and coaxial feeder. For portable operation I used active antennas and simple wire systems. The manual tuning ergonomics were really excellent with well chosen and seamless rate changes on all bands and modes. I found that the Fast Tune button next to the tuning knob took some getting used to and was only really suitable for right-handed operators. This was not too serious a problem as the other tuning options covered most requirements. The mode selection system also took a little practice but was soon mastered. Most of these idiosyncrasies were more a feature of the individual design than real operational problems. Perhaps most important of all was the HF-250's on-air performance. This proved to be extremely good. I've found with many Lowe receivers that the disappointment from the apparent lack of buttons and gizmos is very soon

<b>Frequency range:</b>	30kHz to 30MHz continuous	
<b>Reception Modes:</b>	a.m., s.s.b., c.w., (n.b.f.m + sync a.m. with the DU250 option)	
<b>IF frequencies:</b>	1st - 44.999 to 45MHz, 2nd 455kHz	
<b>Display:</b>	6-digit backlit l.c.d.	
<b>Manual Tuning</b>	c.w., s.s.b. & sync a.m.	8Hz steps/1.8kHz per rev.
	a.m.	50Hz steps/11kHz per rev.
	f.m.	125Hz steps/11kHz per rev.
<b>Keypad entry:</b>	1kHz resolution	
<b>Memories:</b>	255 total - 10 years retention	
<b>Functions:</b>	store, recall, preview and channel	
<b>Tunable frequency stores:</b>	two A & B	
<b>IF Filters:</b>	s.s.b., a.m. & sync a.m.	2.2, 4, 7 and 10kHz
	c.w.	2.2kHz + switchable 200Hz audio peak centred on 800Hz
	f.m.	12kHz
<b>RF Attenuator:</b>	20dB	
<b>Antenna Inputs:</b>	50Ω via SO-239 socket	
	600Ω wire on sprung terminals	
	High impedance active antenna on SO-239 socket	
<b>Audio Outputs:</b>	Record	350mV from 5kΩ
	Speaker	1.6W into 8Ω or 2.0W into 4Ω at 5% t.h.d.
	Headphones	4V from 220Ω
<b>Frequency Response:</b>	s.s.b.	2.2kHz filter 370Hz to 2.5kHz (-6dB)
	a.m.	2.2kHz filter 40Hz to 1.1kHz
	4kHz filter	40Hz to 3.1kHz
	7kHz filter	40Hz to 4.3kHz
	10kHz filter	40Hz to 5.2kHz
<b>Tone Control:</b>	High Pass	330Hz to 4.4kHz (-6dB)
	Flat	40Hz to 4.3kHz (-6dB)
	Low Pass	40Hz to 1.4kHz (-6dB)
<b>Sensitivity:</b>	10dB s/n for a.m. and s.s.b. 12dB SINAD for n.b.f.m.	
	60kHz-2MHz	a.m. 0.7, f.m. 0.6, s.s.b. 0.3µV
	2-30MHz	a.m. 0.5, f.m. 0.6, s.s.b. 0.15µV
<b>Filter Bandwidth</b>	2.2kHz	2.3kHz at -6dB, 3.4 at -60dB
	4kHz	5.9kHz at -6dB, 9.8 at -60dB
	7kHz	8.8kHz at -6dB, 12.9 at -60dB
	10kHz	10.5kHz at -6dB, at -60dB
<b>Intermodulation Effects:</b>	2.2kHz filter	>+4dBm at 10kHz separation
	3rd Order Intercept	>+13dBm at 50kHz separation
<b>Frequency Stability:</b>	10Hz/hr drift at 20°C (typical)	
<b>Distortion:</b>	a.m.	1% t.h.d. or 0.6% with synchronous detector
	s.s.b.	0.2% t.h.d.

overshadowed by pure good performance. The HF-250 is no exception and produced top quality results in all modes. The s.s.b. quality was really very good indeed due to the use of a well designed product detector. Equally the a.m. performance provided very low distortion through the use of a full wave detector. Another example of the way in which Lowe have sought to help the listener through good design is the inclusion of an automatic noise blanker. This operates from the a.m. detector and causes a momentary blanking of the audio signal whenever high level a.m. noise peaks are detected. Whereas some of the flashier receivers would have a switch or two for this, Lowe have sought to simplify the operation by making the feature completely automatic. The r.f. performance was also very good and with no gain before the first mixer, was able to produce a 3rd order intercept point of greater than +4dBm at 10kHz signal separation. This increased to +13dBm with a 50kHz signal

separation. I was particularly pleased with the ability to select different i.f. filters. Not only could this be used to minimise interference from adjacent signals, but you could also open-up the filters for better quality audio when working on a clear band. I suppose the clumsiest part of the whole operation was the clock and timer settings as you had to refer to the manual to remember all the functions. With a small internal speaker mounted inside the top panel,

users would be well advised to use an external speaker for best quality. I tried the HF-250 through a Bose bookshelf speaker and was impressed with the results. You will note that the HF-250 features something of a rarity with a tone control on the front panel. Even this has been very carefully thought-out and gives a flat response when set at its mid point, with low and high pass characteristics respectively at each end of the control travel. ■

## SUMMARY

I certainly liked the HF-250 and found it a refreshing change from many of the receivers in this price range. The HF-250 is eminently suitable for the listener who demands high performance but doesn't want the distraction of an array of switches and knobs for every function. Lowe have also managed to produce a receiver that looks good whilst still keeping that individual design flare that has become a trademark of this manufacturer. Although there were one or two niggles with the HF-250, these were all fairly minor and didn't compromise the overall result. The all important r.f. performance was excellent for all types of listening from utilities through to broadcast. The Lowe HF-250 costs £799 and is available from Lowe Electronics, Chesterfield Road, Matlock, Derbyshire, Tel: (01629) 580800. My thanks to Lowe Electronics for the loan of the review model.