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POPULAR COMMUNICATIONS

SEPTEMBER 2001

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Page 8

Showcase:
Prestone's "Jump It!"
Emergency Power Source...pg. 28

Scanner Questions?
Ans

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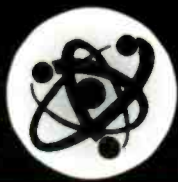
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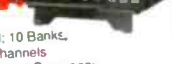


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Chances are good that your local police dispatch center resembles the Long Branch, NJ radio room. But do you have what it takes to hear them? Check out this month's Overheard column by Ken Reiss on page 30 for answers to your most commonly asked scanner questions. (Photo by Larry Mulvehill).

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First Radio Hero Award Presented To Sergeant Bill Ward Of Indiana

All too often we get so caught up in our daily lives — and yes, our radio hobby — that we sometimes forget the public safety professionals, and civilians that are ever-vigilant, working hard to stand up to crime. REACT International, Cobra Electronics, Inc. and *Pop'Comm* have teamed up to honor Sgt. Bill Ward of the Henry County, Indiana, Sheriff's Department in recognition of his having used his Citizens Band radio in the capture of two suspected murderers.

On January 27, husband and wife professors at Dartmouth College were found murdered in their New Hampshire home. Two Vermont high school students were suspected of the crime and, several weeks later, were believed to be traveling west. Slightly before 4 a.m. on February 19, a truck driver at a Spiceland, Indiana, truck stop used his CB radio to broadcast that he had just dropped off two teenage hitchhikers and asked if any other drivers listening were willing to take them further west. Sgt. Ward, who had been concerned

that the suspects might be traveling through Indiana, was monitoring the airwaves using his Cobra CB. When he heard the trucker's broadcast, his suspicions were immediately aroused. Without identifying himself, he radioed back that the teens should wait at the truck stop's fuel desk and that someone would pick them up in few minutes. He and two fellow officers then confronted the teens and, after receiving questionable responses to several of their inquiries, arrested them. At press time, the teens remain in custody in New Hampshire.

This incident, which received nationwide attention, also got the attention of Cobra Electronics and REACT International, Inc. They, along with *Pop'Comm*, had been discussing plans to establish a continuing program to recognize individuals who use two-way radios (CB, FRS, and GMRS) to save a life, prevent major injury or property damage, or give direct assistance in the apprehension

(Continued on page 69)



Sgt. Bill Ward receives the first Radio Hero Award from Bill Thourling of Cobra Electronics.

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-Tom D'Hara, W6DRG, of PC Electronics in Amateur Television Quarterly - Spring 2001

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Frequencies courtesy of Scanning USA, Feb. 2001 -Something new to monitor, by Tom Filecco



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You'd Think The Fresh Air Would Be GOOD For Maine's Lawmakers!

Dear Editor:

Up here in the wilds of Maine, the state is considering two bills regarding the use of electronic devices in vehicles. One only concerns cell phone users in that it would be illegal to use a cell phone while driving unless it's a hands-free model. The second is a bit more troublesome as it seeks to restrict the use of all electronic devices (ham radios, CBs, cell phones, cassette decks, CD players, etc.) unless the devices can be used hands-free. Understandably the hams of Maine are in an uproar over this and cell phone companies over both.

You can read more about it in the *Bangor Daily News* or *Kennebec Journal* online. This is just FYI for the readers of *Pop Comm*.

73s,

Don Hallenbeck, KMEICW

Found: Antenna Insulators

Dear Editor:

I would like to reply to Rick of Bradenton, Florida. The best source for insulators I have found is the local farm store. For example, here in the northeast, Agway — in the Midwest, "Farm And Fleet."

Insulators used in electric fencing to control livestock, can, with a few hand tools and imagination, be reworked for ham and SWL use. And the price is right, too. My favorite is the wooden post-mounted type. A pre-bored 3/16-inch hole for the halyard and several grooves for wrapping the wire-end loop. I have used this type of insulator for several years on dipoles and long wires with no failures from RF (200 watts) or weather, including Nor'Easters and ice.

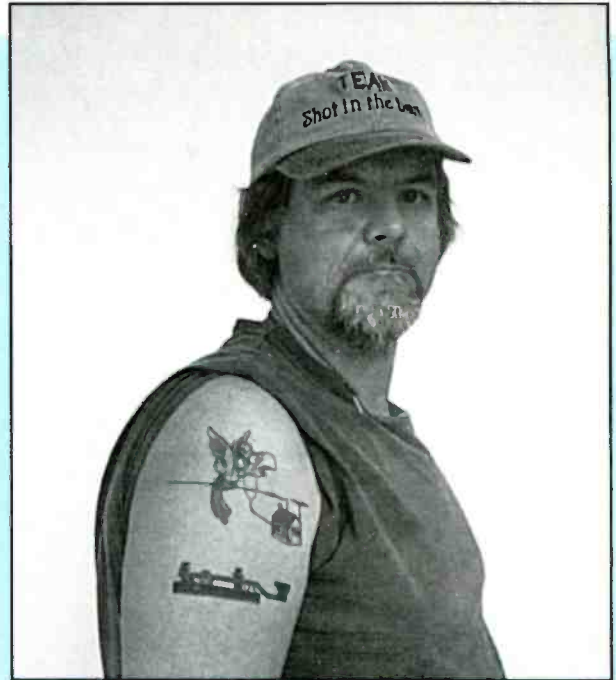
73,

Dave Maier, WIBAT
Greene, Rhode Island

QVC's Sleeping Attorneys

Dear Editor:

I recently read the April "Tuning In" editorial. As both a licensed amateur, W2HVK and an intellectual property attorney with many years experience primarily in the fields of trademarks, copyrights, unfair competition, licensing, and trademark



Here's Virginia's Fred—actually Paula's Fred, of Virginia—who's a regular Virginia Beach Hamfest and Computer Fair attendee. If you're on the East Coast this September 22-23, plan on attending this great hamfest and take a walk on the beach. For more information, call 1-757-HAMFEST.

and other business litigation, I was dismayed at the ignorance of Stanley C. Macel, III in his repeated cease and desist correspondence with Tony Petersen, N7QVC.

It appears that this attorney, who represents a substantial television network, believes the airwaves (and the Internet) would belong principally to large corporate commercial interests and was completely unaware of the amateur service and its altruistic public service mission. The critical fact that an amateur cannot use his license to promote commercial activity under federal law had completely escaped Mr. Macel. This is bad enough, but even more pathetic is this attorney's lack of a basic understanding of trademark law and the intent of Congress when the Anticybersquatting Act was drafted a couple of years ago. It seems this attorney has a tenuous grasp, at best, on this area of law for which he purports to practice in.

If it is any comfort to Tony, N7QVC, if Mr. Macel's firm was ever foolish enough to bring action against Tony, N7QVC, his defense would have the case disposed of on all counts by summary judgment (no issues of facts, defendant receives judgment as a matter of law) and proceed on counterclaim against QVC for violation of the First Amendment, U.S. Constitution (free speech protection), among other counts and ask the court to sanction plaintiff for bringing a suit with absolutely no basis in fact nor law. All pleading could be copied to the FCC (and maybe John Stossel for his "Give Me A Break" piece on "Prime Time" on the ABC Network!).

I'm writing to let your readers know that there are still some attorneys left, like the undersigned and his father who has been a patent attorney since 1950, with both common sense and common decency. QVC and their mouthpieces (attorneys) should be embarrassed and ashamed of themselves but sadly, I believe, they have forgotten the whole matter and moved on.

Large corporate America has a cynical outlook that people are nothing more than consumers to be targeted and exploited. Any individual motivations that go beyond pecuniary interests or material consumption are not on their radar screen, so to speak. The noting of using the airwaves or the Internet for public service and public good and no gain which is implicit in the amateur service is, I am certain, a completely alien notion to the Stanley Macels of the world.

73,

Thomas J. Miller, W2HVK,
South Salem, NY

Chicken Soup, Anyone?

Dear Editor:

I still have my Citizen's Radio Station license issued by the FCC, effective March 8, 1976. If this predates Kentucky Fried Chicken's change of corporate identity to the letters "KFC" I'll have to write and demand they stop using my legal CB callsign, KFC 6221.

All the best,
Harvey

An Admitted Antenna Fetish

Dear Editor:

Congrats on another fine issue (January). I especially enjoyed your review of the portable antenna mast. As a person with an admitted antenna fetish (65 antenna titles in my personal library, 30 antenna design programs on my hard drive, three antenna modeling programs, 5 three-ring binders full of antenna print-outs from the web, four antenna mailing lists, over 200 antennas built over the years and usually seven or eight new antennas per antenna season) I have to admit there are two "sub fetishes" that go along with this malady: Antenna masts and supports, and great circle bearings.

Usually when I get a new antenna book I read the front and back blurbs, the preface and or forward and afterward, then scan the table of contents or the appendix

looking for a chapter on masts or supports, and then read that first.

Although I'm just a working stiff and the EZ-Raze Mast is just a little too rich for me, I really did enjoy the article. This is the kind of special article I love to read. I got a lot of good ideas from the article that can be used for homebrewing. My greatest achievement so far has been a 50-foot PVC mast that I'm quite proud of. It's been up for three years now and still going strong.

Again, I have to say that while I'm not really interested in utility monitoring, I

got hooked on Joe Cooper's column again. How does he always manage to get me to read that which I'm not interested in it? Joe Carr's column was excellent as usual, of course the only problem being that it could have lasted longer. As I stated above, regarding the antenna fetish angle of radiation fits right in with my disease. Not too technical at all.

Another great issue and I wanted to tell you before I forgot — I do find that I too miss Alice.

John H. Carver, Jr.
Mid-North Indiana

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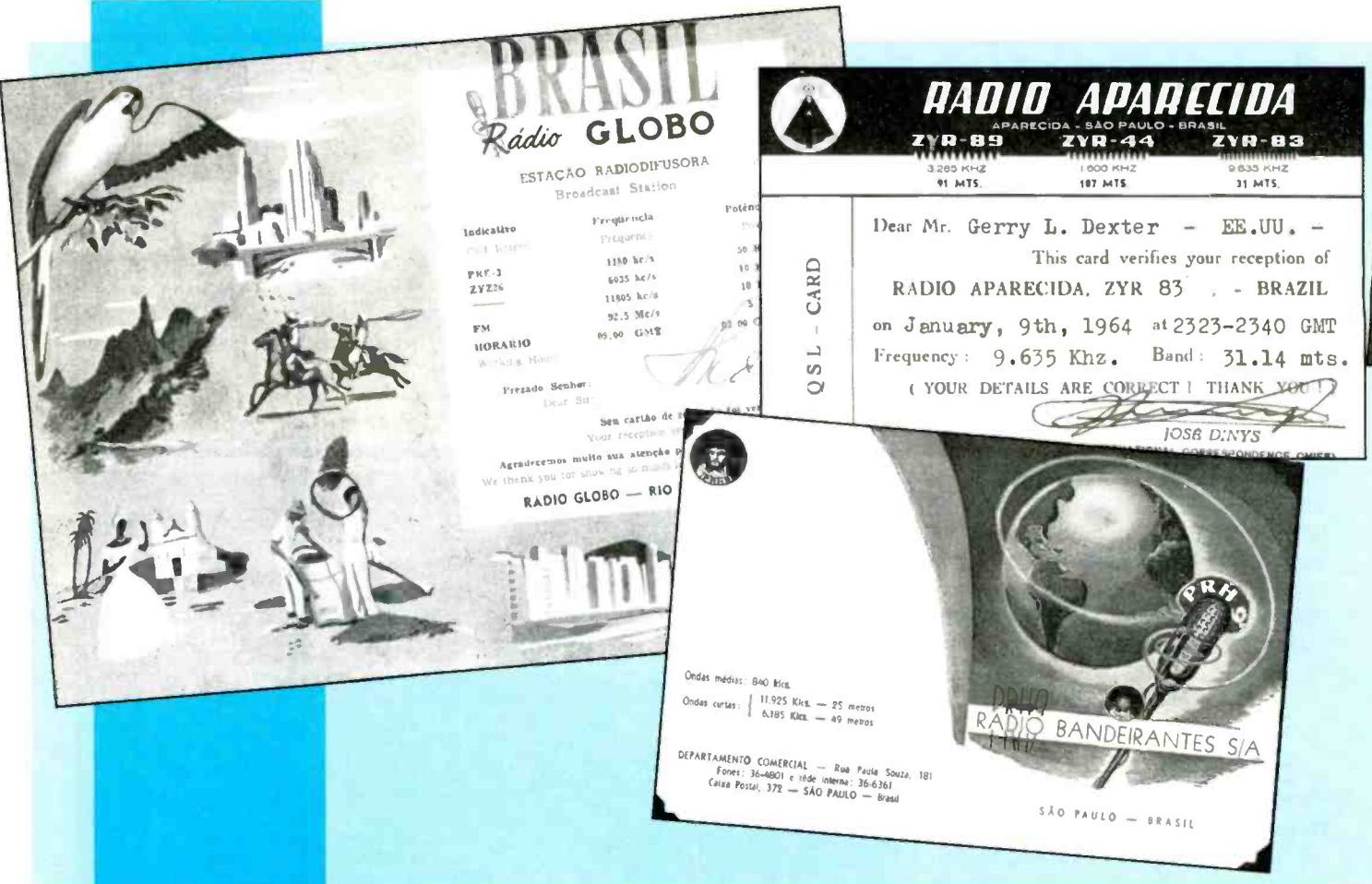
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DXing Latin America's Biggest Target

From Belem To Rio de Janeiro, Here's Your Guide To Bagging The Brazilians!


By Gerry Dexter

“Goooooooooooooooooalllllll,” screams the announcer, stretching the word out for so long you almost think winter will turn to spring by the time he takes his next breath. If you’ve ever listened to a soccer game on a Brazilian shortwave station you’ve heard one of these mile-a-minute guys. They make John Madden sound like he had tranquilizers for lunch!

Brazil is sometimes given short shrift by DXers who have an interest in Latin American stations. Who knows why? Perhaps it may have something to do with having to deal with the Portuguese language rather than Spanish. It seems to be harder for most people to pick out station IDs in Portuguese. Announcers in Brazil seem to speak faster, too. On the other hand, it doesn’t take long before you develop an aural “feel”

—the ability to know you’ve got one in the phones even before an ID comes along. The shortwave scene in Brazil is a lot more stable than in Peru or Bolivia so you will often know what to listen for in the way of an ID. Of course, the more time you spend at it the more adept you’ll become at picking IDs out of the torrent of words coming at you.

Another dicey problem are those frequencies on which two or even three Brazilian stations are riding at the same time! It will help to know whether there are differences in sign-on and sign-off times and to try and pick out mentions of the name of the location city. Many, perhaps even most of the Brazilian stations are simply relaying a local sister AM or FM station, rather than airing separate programming for their shortwave audience.




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rádio rural

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Sr. Gerry L. Dexter
 Rádio Station Wmir-Lake Geneva, WI 53147
 U.S.A.

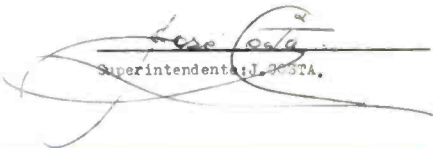
Prezado senhor:

Queira de antemão, desculparnos pela desatenção à /
 VvSs., no tocante à vossa ansiosa resposta, tanto tempo a nós solici- /
 tada. Cumpre-nos ressaltar, que por questão de mudança da Superinten- /
 dência da Rádio Cultura de Campos, queremos acreditar que tenha ha- /
 vido um pequeno tumulto em relação às correspondências que foram /
 arquivadas, sem serem expedidas.

Recorrendo, hoje, aos arquivos, encontrei, não só u- /
 ma, mas duas de suas solicitações, no supracitado pedido.

Recebemos o report, acompanhado de respectiva có- /
 pia, o qual nos regozija tamanha cordialidade.

Sem mais, nos colocamos a seu inteiro dispor e, /
 queremos deixar acentuado os nossos apreços e considerações.


 Superintendente, RÁDIO CULTURA DE CAMPOS.

Stations on 120 and, to a lesser degree, 90 meters are the most propagation-dependent (and generally use very low power as well). You'll need a good early morning or early evening "opening" to catch these, and even then the signal is likely to be pretty weak. Stations on 60 and 49 meters can be sought out at their sign on times or during the evening. Those on the 31, 25, and 19 meter bands are best challenged in the mid-to-late afternoon and evening.

Frequencies on the station list we offer here have been rounded off to the nearest kHz. Any frequency variations are usually very slight. Everything on shortwave is variable, of course, and that includes sign-on and sign-off times. Some stations will go off an hour earlier or stay on an hour later on a weekend or a particular day of the week. Some of the larger broadcasters run extended schedules during major soccer events and other special occasions. We've already noted that the Brazilian shortwave scene is fairly stable but that doesn't mean some stations may be — or become — inactive for whatever reason. For that matter, a new one might appear — something that is always good news.

LBV Mundial (6160, 9550) doesn't have its own transmitter. It uses the facilities of Radio Rio Grande do Sul, but you probably won't hear an ID for the latter. Radio Cultura (6170) relays mostly its local FM but carries the separately programmed AM for an hour or two per day.

You'll notice there are many Radio "Clubes," "Culturas," "Educadoras," "Educações" and "Difusoras." In most every

case, each one is an independent operation, not connected with any of the others. A number are non-commercial outlets.

It's not likely you'll hear them all, but with a fair amount of time and effort you should be able to add quite a few of them to your log. Com os melhores votos de sucesso!

Brazilians On Shortwave

Frequency	Station	Location	Sign-on	Sign-off
2380	Radio Educadora	Limeira	24 hr	
2420	Radio (Super) San Carlos	Sao Carlos	24 hrs	
2460	Radio Alvorada	Rio Branco	24 hrs	
2490	Radio Oito (8) de Setembro	Descalvado	0900	0200
3205	Radio Ribeirao Preto	Ribeirao Preto	0600	0300
3245	Radio Clube	Varginha	24 hrs	
3255	Radio Difusora 6 de Agosto	Xapuri	1000	0200
3325	Radio Tupi	Sao Paulo	24 hrs	
3365	Radio Cultura	Araraquara	24 hrs	
3375	Radio Clube	Dourados	0800	0300
3375	Radio Educadora	Guajara Mirim	0930	1600
3375	Radio Nacional	Sao Gabriel Cachoeira	0900	0200
3385	Radio Educacao Rural	Tefe	1000	0100
3570	Radio Difusora de Brasilia	Brasilia	1000	0400
4754	Radio Difusora Maranhao	Sao Luiz	24 hrs	
4755	Radio Educacao Rural	Campo Grande	0700	0300
4765	Radio Integracao	Cruzeiro do Sul	0800	0400
4765	Radio Rural	Santarem	0800	0400
4775	Radio Congohas	Congohas	0730	0100
4775	Radio Liberal	Belem	24 hrs	
4785	Radio Brazil	Campinas	0730	0200
4785	Radio Cairi	Puerto Velho	0900	0400
4795	Radio Difusora Aquiduaana	Aquiduaana	0700	0300
4805	Radio Difusora do Amazonas	Manaus	1000	0200
4815	Radio Cabocla	Benjamin Constant	0800	0300
4815	Radio Difusora	Londrina	24 hrs	
4825	Radio Cancao Nova	Cachoeira Paulista	24 hrs	
4825	Radio Educadora	Braganca	0830	0200
4845	Radio Meteorologia Paulista	Ibatinga	0700	2100
4845	Radio Cultura Ondas Tropicais	Manaus	1000	0200
4855	Radio Tropical	Barra do Garças	0700	0200
4865	Radio Verdes Florestas	Cruzeiro do Sul	1100	0300
4865	Radio Alvorada	Londrina	24 hrs	
4865	Radio Missoes da Amazonia	Obidos	24 hrs	
4875	Radio Difusora Roraima	Boa Vista	0900	0300
4885	Radio Cultura do Para	Belem	24 hrs	
4885	Radio Difusora Acreana	Rio Branco	0900	0200
4885	Voz Coracao Imacujlado	Anapolis	24 hrs	
4895	Radio Bare	Manaus	24 hrs	
4895	Radio IPB	Campo Grande	24 hrs	
4905	Radio Relogio	Rio de Janeiro	0800	0030
4915	Radio Anhanguera/R. CBN	Goiania	0800	0200
4915	Radio Nacional	Macapa	24 hrs	
4925	Radio Difusora	Taubate	24 hrs	
4935	Radio Capixaba	Vitoria	24 hrs	
4935	Radio Difusora	Jatai	0800	1200
4945	Em. Rural - A Voz do Sao Francisco	Petrolina	0800	0200
4945	Radio Difusora	Pocos de Caldas	0700	0200
4945	Radio Progresso	Porto Velha	1000	0200
4955	Radio Clube	Rondonopolis	0700	0400
4956	Radio Cultura	Campos	24 hrs	
4965	Radio Alvorada	Parintins	0900	0200
4975	Radio Mundial	Sao Paulo	24 hrs	
4985	Radio Brazil Central	Goiania	0600	0200
5013	Radio Copacabana	Rio de Janeiro	24 hrs	
5015	Radio Brazil Tropical	Cuiaba	24 hrs	
5015	Radio Pioneira	Teresina	24 hrs	
5025	Radio Journal de Transamazonica	Altamira	0830	0200
5035	Radio Educacao	Coari	0800	0300

Frequency	Station	Location	Sign-on	Sign-off
5035	Radio Aparecida	Aparecida	24 hrs	
5045	Radio Cultura do Para	Belem	24 hrs	
5045	Radio Journal A Critica	Manaus	0800	0200
5055	Radio Difusora	Caceres	0700	0200
5955	Radio Gazeta	Sao Paulo	24 hrs	
5965	Radio Nova Visao	Santa Maria	24 hrs	
5970	Radio Itatiaia	Belo Horizonte	0700	0100
5980	Radio Guaraja	Florinapolis	24 hrs	
6000	Radio Guaiba	Porto Alegre	0700	0300
6010	Radio Inconfidencia	Belo Horizonte	24 hrs	
6020	Radio Educadora Bahia	Salvador	0830	0000
6020	Radio Gaucha	Porto Alegre	0800	0200
6030	Radio Globo	Rio de Janeiro	0800	2000
6040	Radio Clube Paranaense	Curitiba	24 hrs	
6050	Radio Guarani	Belo Horizonte	0730	0200
6060	Radio Universo/Radio Tupi	Curitiba	24 hrs	
6080	Radio Anhanguera	Goiania	0800	0100
6080	Radio Novas de Paz	Curitiba	0800	0200
6090	Radio Bandeirantes	Sao Paulo	24 hrs	
6105	Radio Cultura	Foz de Iguacu	24 hrs	
6120	Radio Globo	Sao Paulo	0900	0200
6135	Radio Aparecida	Aparecida	0700	0200
6150	Radio Record	Sao Paulo	0800	0200
6160	Radio LBV Mundial	Porto Alegre	24 hrs	
6160	Radio Rio Mar	Manaus	1000	0300
6170	Radio Cultura	Sao Paulo	0800	0200
6180	Radio Nacional Amazonia	Brasilia	0800	2200
9505	Radio Record	Sao Paulo	0800	0200
9515	Radio Novas de Paz	Curitiba	0800	2100
9530	Radio Nova Visao	Santa Maria	0800	0100
9540	Radio Educadora Bahia	Salvador	0830	0000
9550	LBV Mundial	Porto Alegre	24 hrs	
9565	Radio Universo/Radio Tupi	Curitiba	24 hrs	
9585	Radio Globo	Sao Paulo	2200	0200
9615	Radio Cultura	Sao Paulo	0700	0200
9630	Radio Aparecida	Aparecida	0700	0200
9645	Radio Bandeirantes	Sao Paulo	24 hrs	
9665	Radio Marumby	Florinapolis	0800	0000
9675	Radio Cancao Nova	Cachoeira Paulista	1000	2100
9685	Radio Gazeta	Sao Paulo	24 hrs	
9695	Radio Rio Mar	Manaus	1000	0300
9725	Radio Clube Paranaense	Curitiba	0800	2300
11725	Radio Novas de Paz	Curitiba	0800	2200
11735	Radio Nova Visao	Santa Maria	0800	0100
11765	Radio Universo/Radio Tupi	Curitiba	24 hrs	
11780	Radio Nacional da Amazonia	Brasilia	0800	2300
11785	Radio Guaiba	Porto Alegre	0700	0300
11805	Radio Globo	Rio de Janeiro	0800	2000
11815	Radio Brazil Central	Goiania	0600	0330
11830	Radio Anhuanguera	Goiania	0800	0100
11855	Radio Aparecida	Aparecida	0700	0200
11895	LBV Mundial	Porto Alegre	24 hrs	
11915	Radio Gaucha	Porto Alegre	0800	0200
11925	Radio Bandeirantes	Sao Paulo	24 hrs	
11935	Radio Clube Paranaense	Curitiba	1000	2000
11965	Radio Record	Sao Paulo	0800	0200
15135	Radio Record	Sao Paulo	0800	0200
15190	Radio Inconfidencia	Belo Horizonte	24 hrs	
15325	Radio Gazeta	Sao Paulo	24 hrs	
17815	Radio Cultura	Sao Paulo	0700	0200

Brazilian Shortwave Station Addresses

Note: CP = Caixa Postal (Post Office Box)

State Abbreviations:

AC = Acre
AM = Amazonas
ES = Espirito Santo
GO = Goias
MA = Maranhao
MG = Minas Gerais
MS = Mato Grosso do Sul
MT = Mato Grosso
PE = Pernambuco
PI = Piaui
PR = Parana
RJ = Rio de Janeiro
RO = Rondonia
SP = Sao Paulo

Emisora Rural/Voz do Sao Francisco, C.P. 8, 56300, Petrolina, PE
Radio Alvorada, Rua Senador Souza Naves 9, 9 andar, 86010-921, Londrina, PR
Radio Alvorada, Rua Governador Leopoldo Neves 516, 69151-440 Parintins, AM
Radio Alvorada, Av. Ceara 2150, Altos de Grafica a Globo, 69900-470, Rio Branco, AC
Radio Anhanguera/Radio CBN, C.P. 13, 74823 Goiania, GO
Radio Apaecida, Av. Getulio Vargas 185, 12570 Aparecida, SP
Radio Bandeirantes, C.P. 372, 01059-970, Sao Paulo
Radio Bare, Av. Santa Cruz Machado 170, 69010-070, Manaus, AM
Radio Brazil, C.P. 625, 13000 Campinas, SP
Radio Brazil Central, C.P. 330, 74001-970 Goiania, GO
Radio Brazil Tropical, C.P. 405, 78005 Cuiaba, MT
Radio Cabocla, Gleba Tocantins, Lote 15, 69640 Tabatinga, AM
Radio Cairi, Av. Carlos Gomes 932, 78900-030, Porto Velho, RO
Radio Cancao Nova, C.P. 57, 12630 Cachoeira Paulista, SP
Radio Capixaba, C.P. 509, 29000 Vitoria, ES
Radio Clube, C.P. 190, 78700, Rondonopolis MT
Radio Clube, C.P. 102, 37000, Varginha, MG
Radio Clube Paranaense, Rua Rockefeller 1311, Prado Velho, 80230-130 Curitiba, PR
Radio Congohas, Praca da Basilica 130, 36404, Congohas, MG
Radio Copacabana, Rua Visconde Inhauma 37, 12 andar, 20091 Rio de Janeiro
Radio Cultura, Ave. Feijo 583 (Centro), 14801-140, Araquara, SP
Radio Cultura, C.P. 79, 28100-970 Campos, RJ
Radio Cultura, C.P. 84, 85852-520 Foz do Iguacu, PR
Radio Cultura Ondas Tropicais, Rua Barcelos s/n Praca 14, 69020-060 Manaus, AM
Radio Cultura, Rua Cenno Sbrighi 378, 05099-900 Sao Paulo
Radio Cultura do Para, Av. Almirante Barroso 735, 66090 Belem, PA
Radio Difusora, C.P. 297, 78200 Caceres, MT
Radio Difusora, C.P. 33, 75800 Jatai, GO
Radio Difusora, C.P. 1870, 86000 Londrina, PR
Radio Difusora, C.P. 937, 33701-970 Pocos de Caldas, MG
Radio Difusora, Rua Dr. Sousa Alves 960, 12020-030 Taubate, SP
Radio Difusora Acreana, Rua Benjamin Constant 161, 69908-520, Rio Branco, AC
Radio Difusora do Amazonas, C.P. 311, 69000 Manaus, AM
Radio Difusora Aquidauana, C.P. 18, 79200, Aquidauana, MS
Radio Difusora 6 de Agosto, Rua Pio Nazairo 31, 69930 Xapuri, AC
Radio Difusora de Brasileira, Rua Genniassas s/n 69932, Brasileira, AC

Radio Difusora de Maranhao, Av. Camboal20, Barrio Camboa, 65020-260, Sao Luis, MA
Radio Difusora Roraima, C.P. 1870, 86000 Roraima, PR
Radio Educacao, Praca San Sebastiao 228, 69460 Coari, AM
Radio Educacao Rural, Praca Santa Teresa 283, 69470 Tefe, AM
Radio Educadora, Rua Barao do Rio Branco 1151, 68600 Branganca, PA
Radio Educadora, Praca Mario Correa 90, 78957 Guajara Mirim, RO
Radio Educadora, C.P. 105, 13480-970, Limeria, SP
Radio Educadora de Bahia, Rua Pedro Gama 413/E, Alto Sobradinho Federacao, 40230-291 Salvador, BA
Radio Educadora Rural, C.P. 261, 79002-233, Campo Grande, MS
Radio Gazeta, Av. Paulista 900, 01310-940 Sao Paulo
Radio Gaucha, Av. Ipiranga 1075, 2 andar, Azenha, 90169-900, Porto Alegre, RS
Radio Globo, Rua de las Palmeiras 315, 01288-900, Sao Paulo
Radio Guaiba, Rua Caldas Junior 219, 90019-900 Porto Alegre, RS
Radio Guarani, Av. Assis Chateaubriand 499, Floresta, 30150-101 Belo Horizonte, MG
Radio Guaruja, C.P. 45, 88000 Florinapolis, SC
Radio Inconfidencia, C.P. 1027, 30650-540 Belo Horizonte, MG
Radio Integracao, Rua Alagoas 270, 69980, Cruzeiro do Sul, AC
Radio IPB, Rua Itajai 473, Barrio Antonio Vendes, 79041-270, Campo Grande, MS
Radio Itatiaia, Rua Itatiaia 117, 31210-170 Belo Horizonte, MG
Radio Journal A Critica, C.P. 2250, 69061-970 Manaus, AM
Radio Journal Transamazonica, C.P. 226, 68371-970, Altimira, PA
Radio LBV Mundial, Av. SergioTomas 740, Bom Retiro, 01131-010, Sao Paulo
Radio Liberal, C.P. 498, 66017-970, Belem, PA
Radio Marumby, C.P. 296, 88010-970 Florinapolis, SC
Radio Meteorologia Paulista, C.P. 91, 14940-970 Ibitinga, SP
Radio Missoes de Amazonia, Travessa Ruy Barbosa 142, 68250 Obidos, PA
Radio Mundial, Av. Paulista, 2198, Terro, Cerqueira Cesar, 01310-300, Sao Paulo
Radio Nacional, Av. Alvari Naua 850, 69750 Sao Gabriel de Cachoeira, AM
Radio Nacional, C.P. 2929, 68900 Macapa, AP
Radio Nacional Amazonia, SCR N 702-3 Bloco B, Lote 16-18, Ed. Radiobras, 70323-900 Brasilia, DF
Radio Nova Visao, Rua do Manifesto 1373, 04209-001 Sao Paulo
Radio Novas de Paz, Av. Parana 1896, 82510 Curitiba, PR
Radio Oito de Setembro, C.P. 8, 13690, Descalvado, SP
Radio Pioneira, Rua 24 de Janeiro 150 Sul Central, 64001-230 Teresina, PI
Radio Progresso, Estrada do Belmont, s/n, B Nacional, 78903-400, Porto Velho, RO
Radio Record, C.P. 7920, 04084-002 Sao Paulo
Radio Relogio, Rua Paramopama 131, Ribeira,, Ilha do Governador, 21930-110, Rio de Janeiro
Radio Ribeirao Preto, C.P., 1252, 14025, Ribeirao Preto, SP
Radio Rio Mar, Rua Jose Clemente 500, 69010-070 Manaus, AM
Radio Rural, Rua Sao Sebastian 622, 68005-090, Santarem, PA
Radio (Super) Sao Carlos, C.P. 168, 13560-970, Sao Carlos, SP
Radio Tropical, Rua Carajas 69, 76800 Barra do Garcas, MT
Radio Tupi, Ave. Nadir Dias Figueiredo 1329, 02110-901, Sao Paulo, SP
Radio Universo/Radio Tupi, C.P. 7133, 80000 Curitiba, PR
Radio Verdes Florestes, C.P. 53, 69981-970, Cruzeiro do Sul, AC
Voz Coracao Imaculado, C.P. 354, 75001-970, Anapolis, GO ■

Stereo SSB and CW? Yes! (and more!)

A "Must Have"
Station Accessory!



AOR's new Multi-Media Terminal (MMT) is a powerful new tool to add to your station. More than just DSP, transmit and receive PSK31 and RTTY, listen to amazingly clear audio, equalize your mic, apply potent filtering and hear "weak ones" others may miss.

AOR MMT TDF-370

- Derived Stereo SSB and CW signals are incredibly clear.
- Use powerful DSP noise reduction and filtering technology, including Fast Fourier Transform.
- Decode and display PSK31 or RTTY, on the LCD panel, no external PC required!
- Enhance your transmitted audio with 8 channels of mic equalization.
- Digitally record up to 102 seconds of audio in up to 8 memories.
- Receive SSTV 56.7 kHz (external PC and software needed for viewing).

AMAZING AUDIO

With a new Fast Fourier Transform audio filter, the MMT applies DSP filtering and creates a more "natural" sound, pleasing to the listener. Line enhanced noise reduction uses new algorithms to dramatically reduce background noise. An auto-notch function can be used to reduce or eliminate annoying interference. You won't believe your ears!

"HIGH FIDELITY" SSB

This is not a conflict of terms! AOR's unique technology derives unbelievable audio from a 2.4 kHz source in simulated stereo, through the provided headphones. The results are amazing and have been compared to "FM quality" reception. You didn't know your radio could sound this good. Just about everyone who hears it says, "Wow!"

BETTER TRANSMITTED AUDIO

Use the built-in microphone equalizer to enhance your transmitted audio. Contour a profile for your vocal characteristics or overcome some of the limitations that may exist in your microphone.

IMPROVED CW OPERATION

Built-in 100, 200 and 300 Hz audio band pass filters. Center frequency is adjustable from 800 Hz with 450 Hz pitch. There is also a special noise reduction circuit just for CW operation.

"STEREO" CW RECEPTION

The built-in band pass filter has independent outputs for the left and right channels, allowing independent bandwidth settings heard through the included stereo headphones.

DIGITAL MODES WITHOUT A PC

Receive and display PSK31 and RTTY (Baudot) modes without the need for a PC. AOR's MMT displays text on its easy-to-read LCD display. PSK31 formats include BPSK and QPSK. RTTY operations include 170, 425 and 850 Hz shifts.

PC INTERFACE

The MMT has a rear panel DSUB9 connector and a serial cable is provided. You can set internal parameters of the MMT and operate PSK31 and RTTY using a simple terminal program. You can also transmit and receive SSTV (56.7 kHz) through your computer (optional software needed for SSTV).

DIGITAL VOICE RECORDER (DVR)

Capture up to 102 seconds of audio, in as many as 8 memories, in the MMT's DVR. DPCM compression saves space and delivers good fidelity.

POWER MISER

The AOR MMT operates with just 4 internal AA batteries or from a regulated external supply of 9 ~ 15 VDC.

ACCESSORIES INCLUDED

With the AOR MMT, you get: input cable, stereo connectors, 8-pin mic connectors, power cable, stereo earphones and serial cable for connection to a computer. Note: some soldering of wires and connectors may be required to adapt your transceiver's mic and mic input with the MMT. No alteration to your existing equipment is necessary.



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Specifications subject to change without notice or obligation.

Build Phil's CB Semi-Flexible Walkie-Talkie Antenna

It's Just The Right Size, And Perfect For The Kids

By Phil Karras, KE3FL

This antenna came about because of the need to have an antenna that was not too long or rigid for the young people to use during our church's Vacation Bible School. The older kids using the walkie-talkies (WTs) walk around the church grounds to make sure none of the little ones decide to go home on their own.

Two years ago the boys who used the WT's said that the antennas were too big and they had to be careful of them all the time. Also, they discovered that they could hear too many other stations. So we tested out the idea of using less than the optimum antenna. We first tried four sections — two above and two below the center loading coil. That worked fairly well, but the antennas were still a bit long. We also tried using only two sections, but this proved to be less than optimal, and we decided to use four sections for Vacation Bible School.

This past year I bought five of RadioShack's model TRC-226 WT's. These WT's have an internally attached antenna, not a removable one with a BNC connector. Again we were faced with the same problem: the full-length antenna is too good and too cumbersome — two sections is a good length, but not good enough, and four sections work well but is still a bit long.

My first idea was to replace the existing antennas with a BNC connector and buy a rubber duck to see how they would work. I was able to modify one WT by adding a BNC connector but to do so, I had to cut the antenna support down by half, and I didn't want to do that to all the WT's. When I priced the anten-



CB with semi-flex antenna, CB with rubber ducky, and normal CB antenna collapsed.

What You'll Need

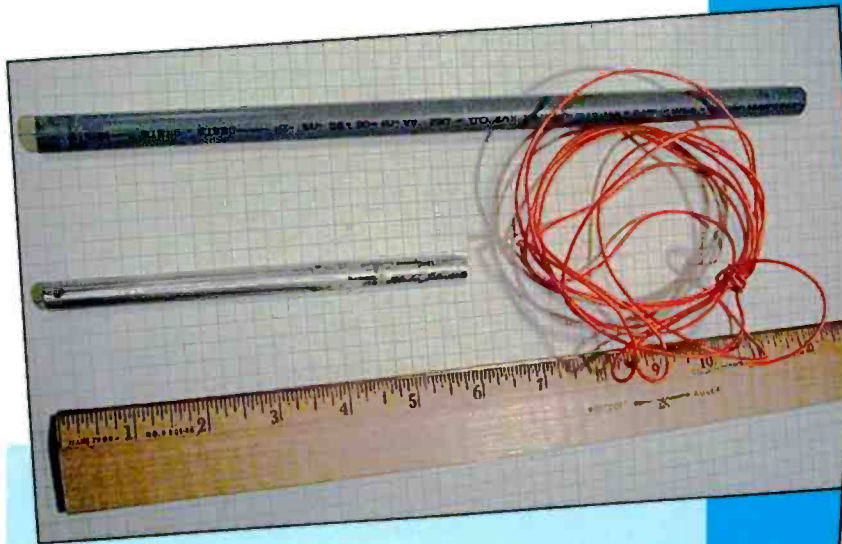
- 1 foot of 1/2" OD PVC (conduit PVC, the gray stuff, about \$2 for 5 feet)
- 6" 3/8" OD aluminum dowel (hobby store? about \$3 or less for three feet)
- 9' 1" of stranded wire (sizes: 24 to 22)
- heat-shrink tubing 13.5" long, ID big enough to fit over the PVC & wire
- scissors
- wire cutters
- wire strippers
- small Phillips screwdriver
- large Phillips screwdriver
- electrical tape
- marker
- 1/8" drill bit
- variable speed drill
- heat gun
- knife
- hack (or electric) saw

nas at \$22 each I gave up that idea. (That was about half the cost of the WT's!)

My next idea was to make my own rubber duck with about one-foot PVC and about 9 feet of wire coiled around it. I thought a wooden dowel would serve as the means to hold the PVC to the WT, but I found that I already had an aluminum 3/8" dowel and it fit so well into 1/2" OD PVC that I didn't even need a screw to hold the two pieces together.

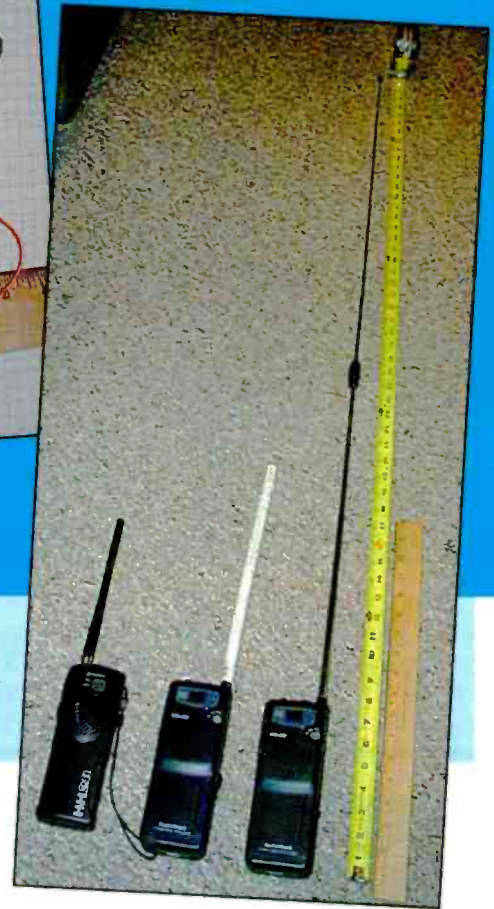
Preparing The Antenna

- *Cut one foot off the PVC (Use the saw or a sharp knife.)
- *Cut 6" off the aluminum dowel.
- *Cut 9'-1" of wire off your spool/supply of wire.
- *Strip off about 1" of insulation from the wire, one end only.
- *Bend the bare wire up into the PVC on one end and tape the wire to the PVC.



↑ The PVC, aluminum rod and wire for the semi-flex antenna.

CB with semi-flex antenna, CB with rubber ducky, and normal CB antenna out. →



*Drill a 1/8" hole through the aluminum dowel at the same location as the original antenna, about 3/16" from the bottom.
 *Clean out the newly drilled hole. You do not want any small bit of aluminum getting into the WT since it is surface-mount technology (SMT) and any small bit of aluminum could cause a short.

Preparing The WT

First, remove the radios battery plate and the two screws found inside. Then, remove the one screw from the top/back of the WT. You should now be able to pull the back off the WT. I start with one long edge. Once that is free, I pull the back away from the other edge, which usually pops it off. Be careful! The back is held on by small plastic tabs, which are easy to break and the battery wires are connected to both pieces. Don't pull so hard that you rip the wires out! If you aren't able to get it off, relax, take a deep breath, and think about how it is attached. There are two tabs on either side of the case, which are a bit under the other part of the case. You need to pull up at a bit of an angle so the tabs are pulled both up and away from the other part of the case. I slipped my fingers into the battery compartment and pulled up and in to get the first side off. Then I pulled on the free side by pulling away from the attached side and then pulling towards the free side in order to free the tabs that were still attached.

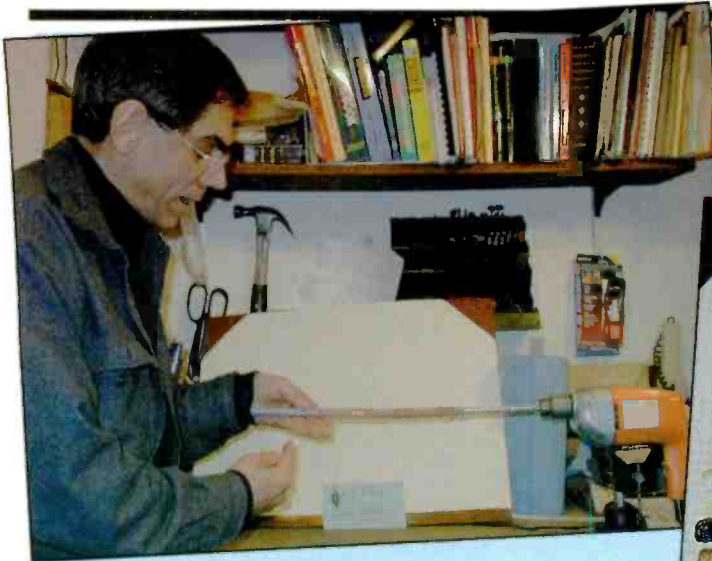
Carefully lay the case down. The battery wires are attached to both parts here and they are not strong wires. Next, remove the screw holding the antenna in its cradle-mount and slip the antenna out of the WT. You might find it easier to push the antenna in a bit in order to facilitate removal of the little daub of rubber glue they used to hold the antenna in. It is near the top just under the antenna support.

Adjusting The New Antenna

Slip the aluminum dowel into the WT and screw it to the antenna mount. Slip the PVC end with the wire bent up into it over the protruding portion of the aluminum dowel. This may be a tight fit — the larger diameter of wire you use, the tighter the fit. I've used both 22 and 24 gauge wire. The larger was a bit more difficult. You should push the PVC on until it stops up against the WT antenna support.

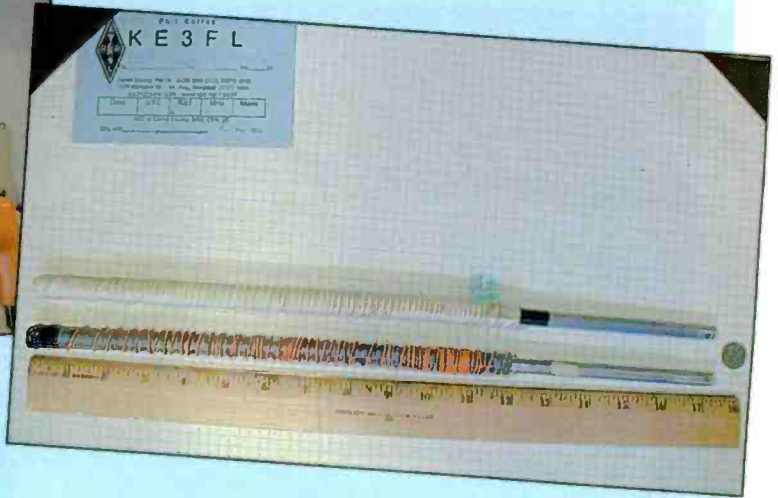
Remove the new antenna from the WT. Place the aluminum dowel into the variable speed drill and tighten it down. Cut a small (less than an inch long) piece of electrical tape off the roll and tack it on to something close at hand. It will be needed later.

I started with very poor-looking antennas, but by the fourth one it looked fine. The antennas work well even if they are unevenly wound, so don't worry about it. I have three that are uneven and two that are very evenly wound. I didn't bother to go back and rewind the uneven ones.



The finished antenna with and without heat shrink tubing cover.

The author winding the wire onto the PVC of the semi-flex CB antenna.



Using slow speed, turn the drill on and feed the wire as smoothly as you can so that it evenly coils onto the PVC. STOP before the last bit of wire flows through your fingers! If you let go of the wire, it will start to unwind and the only thing to do then is

to unwind it completely and do it all over again. Use that piece of tape to tape the end of the wire onto the PVC. Cut another piece of tape off the roll and tape over the open end of the PVC. Make sure it is large enough so some tape is over the edges.

Cut from the outside edges of the tape to the PVC and bend the tape down. (This is to block the hole in the PVC so nothing can get into it. Anything that gets into the PVC will change the characteristics of the antenna.) Put the heat-shrink tubing over the PVC antenna, leaving just a bit over the end that goes into the WT. You want it to shrink right onto the PVC but NOT onto the aluminum. Remember, you pressed the PVC right up to the WT antenna support, so there is no room for the heat-shrink. Use the heat gun to shrink the tubing, starting from the aluminum end and moving up to the top of the PVC. Before the heat-shrink tubing has time to cool and harden, cut off the excess tubing at the top of the antenna.

If any tubing gets below the PVC at the aluminum end, cut it off but be very careful you do not cut the wire! (I used a sharp knife.) If you end up cutting the wire off that was under the PVC, you can try pulling a bit more of it free and stripping it. This will make the overall length of the wire a bit less than 9 feet but will not cause any problems with the antenna.

Put one wind of tape around the aluminum right near the PVC. I used a bit more than one wind and cut the tape at an angle so that it was wider at the end away from the PVC. This made it a bit thicker further in the WT antenna support and made for a better fit.

Assembling The WT

Slip the antenna into the WT. If it doesn't quite fit, you can remove it and try pulling the PVC off the aluminum a bit. Don't pull too hard — you will only need to move it a small amount. If you pulled it off too much, just mount the antenna to the WT and push the PVC back on AFTER you have screwed the aluminum part to the antenna cradle-mount. Screw the aluminum part to the antenna cradle-mount.

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At this point, check that the antenna is snug at the top of the WT antenna support. If it is not, you might want to take it apart again and add a bit more tape to the top of the aluminum just under the PVC. If the PVC doesn't butt up against the antenna

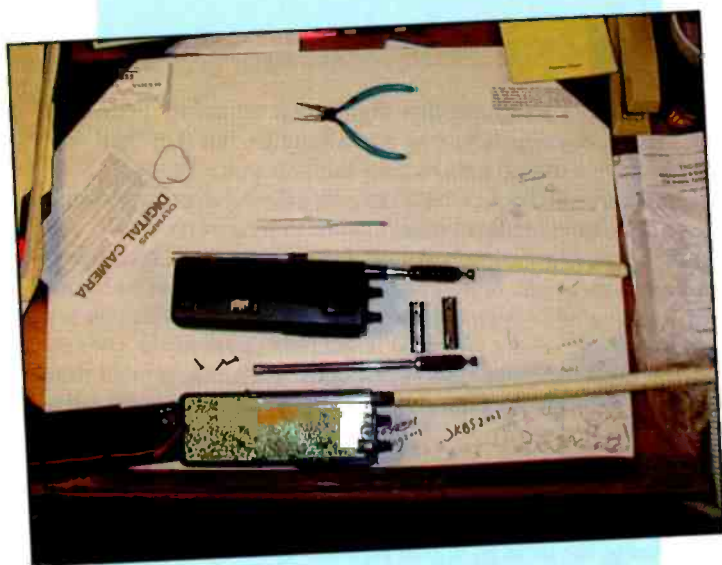
support, push on the PVC so that it does. Snap on the back of the WT and screw it back on. Make sure the case fits closely together. If it doesn't, the battery door will be too loose.

There is no way to test or adjust the SWR of this antenna. Since the user's manual simply warns that not extending the antenna to its full height will only cause poor performance, there is no need to worry about the SWR of this antenna in relation to hurting the final transistor of the WT. If your WT warns about possible damage due to a high SWR, then you might not want to build this antenna for that radio.

This antenna is intended to be good enough for the kids to hear each other within about a block or two and no more. It does this very well and the kids had a great time using them. A friend, Joe WA3OHI, and I tested these units and we were able to get almost a half-mile with the semi-flex antennas over hilly, house-ridden terrain. The full antennas did much better, as expected.

This modification is easy and reversible so that the original antenna can be placed back into the WT without any adverse effects to the WT. Once the semi-flexible antenna is made, the conversion only takes five minutes or so (though not as quick as a BNC mounted antenna swap).

To change this design for a different WT, you'll have to open up the WT to see how the antenna is connected. In a different RadioShack model — TRC-200, I found that the aluminum part would need to be about 1.5 inches longer and I would have to drill and tap into the bottom of one end of the aluminum. In some ways this is a better arrangement, since I can drill and tap any appropriate-sized hole. (I wouldn't need a metric screw. I could use an English size that is close enough to pass through the hole.)



The two CBs — one with the new semi-flex antenna installed, the other normal.

When Your City “Goes Digital”

If you're a member of your local city or county emergency communications team, there is plenty you can do to prepare for their eventual switchover from analog to digital. Whether you provide emergency amateur radio, or GMRS communications, or provide FRS, MURS, or CB comms, the switch from analog to digital would hopefully include back-up communications by volunteer radio operators.

Before the big switch, you may be asked to help test the system and locate dead spots. The emergency communications team may be asked to run exercises over the new digital radio system in order to prove reliability of the handheld radios, capability to switch from channel to channel, and maybe put on demonstrations to help city personnel better understand the reasons behind going digital, echoes, delays, and sometimes the need to move the equipment a fraction of a foot in order to get into a “hot” spot. As professional radio communicators, you may deal with this regularly, but for public safety officers, the last thing on their mind might be how to play with this new equipment and get it to work when they might need it most in an emergency.

“Many public safety organizations are going digital because they have outgrown the capacity of the number of frequencies or channels they are limited to using.”

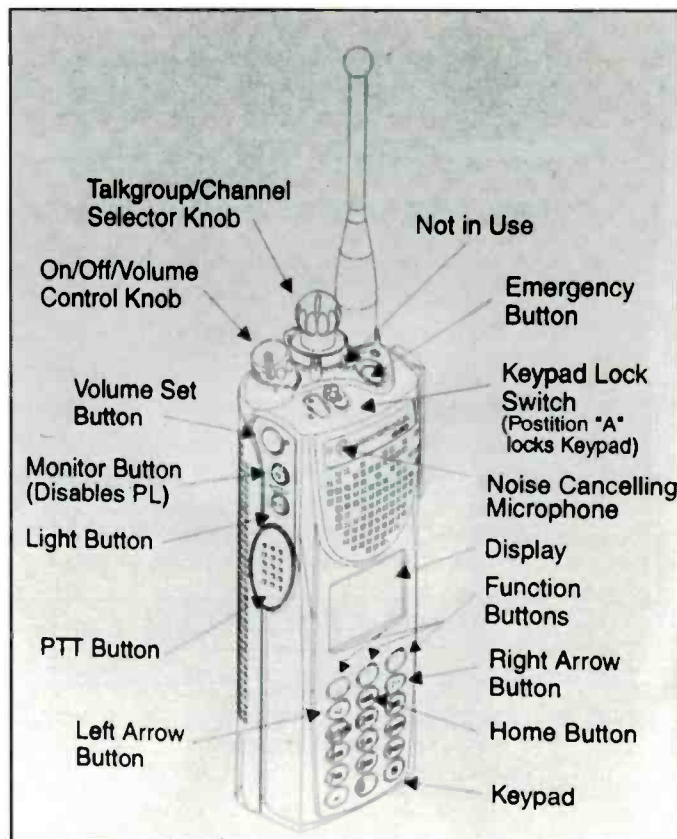
Why The Move?

Many public safety organizations are going digital because they have outgrown the capacity of the number of frequencies or channels they are limited to using. Many cities would also like to communicate with other cities around them without having to carry a trunk full or belt full of different radios. Police departments might also like the capability of talking directly to the fire department, and the fire department could appreciate the capability of switching to a channel that public works or lifeguards might be monitoring.

Going digital also locks out eavesdroppers. Trunked digital systems may require specialized equipment to scan or monitor. Encrypted trunked digital systems might be impossible to monitor, except by other designated city radio sets.

Going digital will add tremendously to expanded channel capacity — our local police radio service went from five channels to over 80 talk groups and 10 channels within each talk group. And going digital allows programmable features such as emergency priority override, priority interrupt, time-out timer, lost radio locator, and the capability to reuse our limited resource of frequencies available to a digital system.

For those of you taking advantage of the personal communications service (PCS) phones, the quality of the digital call will sound much like PCS; voices will almost sound natural,



A look at the Astro XTS3000 portable radio.

and all voices will have that digital-type sound to them. You can still recognize who you are talking to, but they will certainly have a digital tone to their familiar voice.

But there will be drawbacks to going digital over a good analog public safety radio system. For one thing, conversations will take longer. On the trunked digital system, you press the transmitter push-to-talk button or HT bar, and a second or two goes by until a double beep confirms it's time to talk. After you say your message, there will be a noticeable pause in the conversation until the other station responds. This exaggerated time delay is at its greatest (or worst) when operating through a digital repeater system.

When talking direct, unit-to-unit simplex the delay is less noticeable, but still there. You will not be able to carry on a very fast-paced conversation, even direct from one radio to another, bypassing the trunked digital repeater system.

Most digital systems operate in the 800-MHz range, possibly sharing some of the same older channels that were analog at one time. As public safety departments switch from analog to digital, there may be repeater translator stations on a sec-

ondary channel to keep everyone in touch. But opening syllables usually get crunched, and the resulting audio of either analog-to-digital or digital-to-analog will be less than digital natural sounding. The range of the new 800 MHz digital trunking system depends a lot on where the \$500,000 trunk site repeater systems are located. Some cities may use one transmitter, and various voting receivers. Yet others may use several low-level transmitters, with receiver sites right at the transmitter location, providing one antenna system for both.

Where Volunteers Come In

This is where the volunteer radio operators come in — assisting your city in doing site surveys. This means taking equipment in the field and checking transmit and receive capabilities anywhere and everywhere within the city. When the digital trunked radio gets into an area of poor receiver lock on the transmitter datstream, the radio will sound off. Unlike an analog system where you just don't get reception, the digital radio may let you know **LOUD AND CLEAR** that you are in a no-receive radio zone. You can test this feature by unscrewing the 800-MHz antenna, and a couple seconds later, the radio lets you know that you have lost "sync" with main dispatch.

Unit-to-unit 800 MHz digital simplex range may be unbelievably short in a major city. With an analog system, you might be able to get two or three blocks away from each other before signals get rough. On digital, some of the testing we did here in Southern California resulted in loss of simplex communications just a half block away when one station was in a parking structure, and the other station was just across the street. We couldn't believe we didn't have enough signal strength, but we did.

Our simplex range was so minimal with constant break-ups because of multipath distortion. With an analog radio, the FM just begins to sound rough. On a digital system with multipath distortion, the signals arrive out of phase, and the radio rejects both the stronger as well as the weaker signal and gives you no reception at all. On simplex, the other station doesn't get a confirmation that he or she was able to get through, so what might have been a call for assistance on simplex would only be received as nothing coming through on your receiver — even though you're only separated by a

couple hundred yards. Multipath distortion doesn't give you a telltale garbled sound in the receiver — you just don't hear anything!

The Hurdles

Another surprise when going digital is talkaround on the dispatch channel. On a conventional analog system, if you get into a building with your partner and your communications are no longer repeated on your main channel, you could go to talkaround, and the other sta-

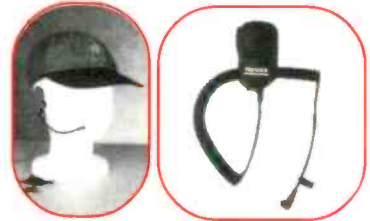
tion could be instructed to switch from duplex to simplex on dispatch output. On digital, when you go to "talkaround," you are simplex on a completely different trunking channel, and there may be no way to talk around on dispatch output. This means that you could be inside a building without capability to hit the local cell site for the dispatch repeat channel, and have no way of telling your partner inside the same building to switch over to simplex talkaround. Dispatch would also have no way of hearing your simplex talkaround com-

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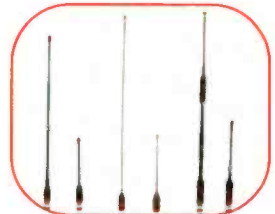
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3 SHORT RAPID BEEPS WHEN PTT PRESSED	Talk permit tone-The user must wait for these tones before talking on a trunked talkgroup.
CHIRP CHIRP	Portable radio's battery needs charging.
1 BEEP FOLLOWED BY 5 BEEPS	The Emergency button has been pressed and was acknowledged by the system.
A HIGH PITCHED TONE EVERY 10 SECONDS	Failsoft-Trunked system failure. Multiple Talkgroups share a conventional channel.
A MEDIUM PITCHED TONE EVERY 5 SECONDS	Out of range tone-Occurs when radio is out of range of the trunked system.
A CONTINUOUS TONE	Talk Prohibit-Occurs when pressing PTT and radio is out of range of the trunked system or system has failed or talkgroup is in use.
MOMENTARY LOW PITCHED TONE	Invalid Chirp-Indicates that you have selected an unprogrammed function.
BUSY TONE SIMILAR TO PHONE BUSY SIGNAL	This tone is heard when a user attempts to transmit a message on a trunked talkgroup when all frequencies are in use.
4 SHORT BEEPS RECEIVED AFTER A BUSY TONE	Automatic Callback-A frequency is now available for you to transmit. Press PTT and begin the transmission

The Costa Mesa, California Police Department's User Card for Tone Definitions.



A multitude of radio gear owned by one volunteer communicator in California.

munications, nor will they have any way to know that you are out of range on your main dispatch channel.

Yet another hurdle which public safety personnel will need to address is getting around all of those green, orange, black, and talkaround channels, plus dialing up the different zones. On the Motorola Astro XTS3000 portable radio, several radio specialists point out the myriad of buttons, function buttons, right arrow buttons, talk group/channel selector knob, left arrow buttons, and the keypad itself may not be public safety officer friendly.

"The radios are a lifeline for the police officers on the street," commented a retired Placentia, California, police chief to the *Los Angeles Times*. "If they can't communicate with each other, then you've got a serious problem," adds the police chief, after the *Los Angeles Times* ran the headlines, "Radio: Grand Jury Criticizes County." *The Times* indicated that government officials have provided inadequate training to police officers, failed to test the radio system before police began using it, and made key decisions during the mid-1990s that reduced radio coverage. But one local volunteer communications team serving the City of Costa Mesa, California, MESAC, spent several days testing portables throughout the city, and found portable radio coverage very satisfactory back to the main dispatch channel, "Green 1," and relatively satisfactory when communicating on

talkaround, other than downtown garages where talkaround is troubled with multipath signal distortion.

The Motorola Astro XTS3000 is a \$3,500 handheld with more than enough features that any city or country may grow into. The County of Orange provides a PowerPoint presentation, along with all of the sounds that the radio could make, for those cities under its jurisdiction switching over from analog to digital. The county's communications training officer, Marten Miller, provided police agencies an excellent overview of the equipment — and since Miller is also a licensed amateur radio operator, he is quite familiar with conditions in the field contributing to multipath fading, hot spots, dead zones, and the need for public safety officers to move only a foot or so in order to re-achieve a hot spot. At 800 MHz, signals bouncing around inside a building or parking structure will either be IN phase for a hot spot, or out of phase for a "not spot." Miller points out that a little movement one direction or another will put you in one area or another.

Alinco Transition To ATOC Distributing Nearly Complete; Repair Service Delays To Be Expected For A Few Weeks

The transfer of Alinco's distribution system from California to ATOC Amateur Distributing in Ohio is nearly complete, according to Craig A. Cota, a principal with the ATOC operation. "We have been working day and night unpacking, organizing, and shipping as fast as we can," he said. "It's been a huge project but we now have it under control."

Complicating the transfer to ATOC was the fact that the Dayton Hamvention occurred just as the transition was taking place. "Our timing could not have been worse, given the demands of the Dayton event," Cota said. "We were literally unloading a moving van, opening boxes and driving merchandise down to the dealers at the show. Our people put forth an amazing effort to bring it off. I'm very proud of their efforts."

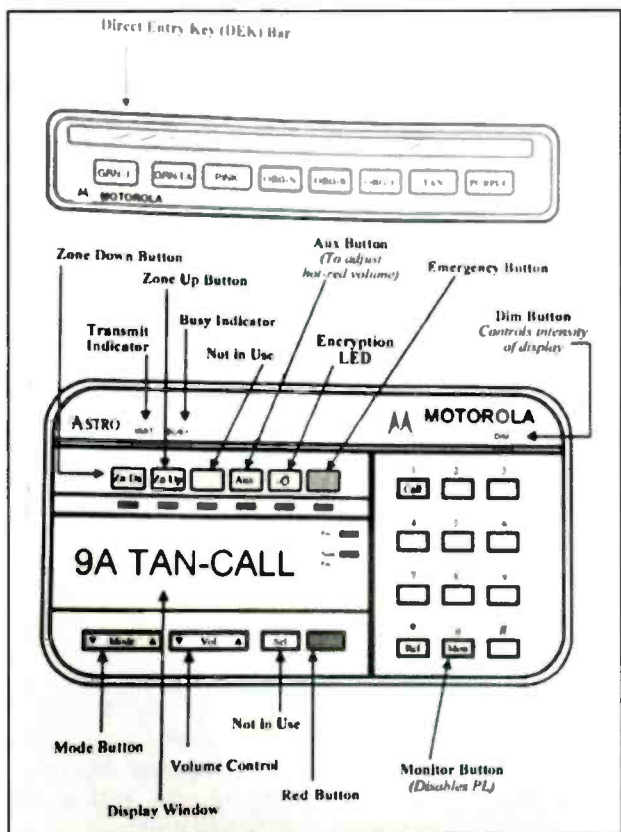
Evelyn Garrison handles dealer orders for ATOC saying the stores have been very cooperative and have already placed significant orders with ATOC. "We had a built-up demand that occurred while everything was in transition and now we're getting caught up. The dealers have been great and some have already said they like the shorter shipping times from ATOC's mid-America location in Ohio."

One aspect of the ATOC changeover still to get caught up is the service function. "We're asking for a bit of patience from customers who need repairs," Mr. Cota said.

He continued, "We had hoped to have factory training personnel work with our staff in the transition. Unfortunately, plans were delayed but the training is now scheduled for June."

Cota said customers do not need to be concerned with warranty expirations. "We will continue to honor warranty claims, even if the warranty expires during the transition period. We're sorry for the delay but we're addressing it as quickly and honestly as we can. We hope to be fully caught up in six to eight weeks. I am putting the emphasis on quality in our work and I believe our customers wouldn't want it any other way."

ATOC Amateur Distributing LLC announced it was becoming the distributor and service agency for Alinco products in the U.S. and Canada on May 3. Mr. Cota says that Alinco will continue to have a presence at the major Amateur Radio conventions across the country. "The Amateur Radio public is very important to us and Alinco," he said. "I'm looking forward to meeting customers and dealers at the shows. Dayton was great, but it's only the beginning for us. We'll soon be seeing some exciting new products from Alinco in addition to what we already have. I thank everyone for the warm welcome we've received."



The Astro Spectra's mobile radio panel diagram.

Vehicles will be equipped with the Motorola Astro Spectra mobile radio, and this equipment appears easier to operate than the little handheld. It takes approximately 30 days for an agency to switch from analog to digital, with one digital channel reserved for repeating older analog communications.

And watch out for the small emergency button, because once the emergency button is pushed on either the Motorola Astro or Spectra radio, all heck breaks loose back at dispatch and Control 1. The button is quite accessible, and some public safety personnel indicate that it's too accessible. It takes some additional button pushing in order to get out of the emergency mode, and there will be a permanent record of which unit was squawking the digital call for help.

Once 800 MHz digital users become accustomed to transmit delays, receive delays, and echoes when using their equipment around someone else with the same equipment tuned into the same channel group, things will move forward with terrific capability for one agency to contact another when before with analog it was just not possible. Here in Southern California, when the big one finally hits, those agencies on 800 MHz digital may have unlimited access to communicate with other agencies in the county, all with their new radio system.

If digital 800 MHz is coming to your county or city, your volunteer emergency communications group may provide some valuable radio testing before the system gets officially turned on. Contact your local communications supervisor and volunteer your communications group to help canvas the city to find those elusive hot spots and "not spots." I think you'll be impressed with the overall performance of the new 800 MHz digital system as we were in the City of Costa Mesa, California, Orange County. ■

the wireless connection

by Peter J. Bertini, <radioconnection@juno.com>

a look behind the dials

Back To The Basics: Dealing With Cabinet Repairs

Some month's back — December 1999 to be precise — we began a restoration odyssey; an attempt to fully restore what was left of an early 1930s vintage American Bosch tombstone. I found the set one early Saturday morning at one of those tag sales that sets off alarms: an elderly gent in an old mill town, living a very old house that has been a part of history for many years. While the gentleman hosting the tag sale didn't have any radios displayed with the other items being sold, he did recall—when prodded—there was indeed an early wood set in his cellar, but warned that the condition left much to be desired. I've found it always pays to *ask* about old radios in these situations; even if none are on hand. It often results in good leads from other participants within earshot!

The set as I found can be seen in **Photo 1**. The cabinet veneers have delaminated (separated), the result of decades of being stored on a damp New England cellar floor. The chassis and other metal parts had severe rust damage; take a look at **Photo 2**. These two photos show the full extent of the cabinet damage. There's not much to work with. Why buy a radio in this condition, or even bother to attempt to repair and restore what should be a parts donor or dumpster fodder? Well, for some us it is the challenge to see what we can do, and the rewards: that great feeling you get when you are able to turn a piece of trash into a true desirable and collectable object!



Photo 1. The American Bosch tombstone, after years of storage in a damp New England cellar.

One thing is for sure: unless you take the plunge, and attempt to do some basic veneering or cabinet repairs, you will never do so! I don't claim to be an authority, but every cabinet I do increases my skill, knowledge, and confidence. I suggest hunting around for a boxy shaped simple (read cheap) five-tube AM wood set from the 1930s or 1940s that's sporting some cabinet damage. Look for a set lacking fancy inlays, or sets with curved (waterfall) edges, which require more skill. Believe me, there are no shortages of wood sets that need cabinet repairs. This will be a case of the students passing the teacher in short order — if I can do it I am sure you will do it better and faster!

Salvaging What Is There

The chassis restoration back to like-new condition, and some of the woodworking to restore the cabinet baseboard, was covered in earlier "Wireless Connection" columns. With electronics out of way, our next few columns will deal with the steps needed for the cabinet restoration.

I began by saving and restoring the front cabinet panel. This is the heart of the radio, its face so-to-speak, since it's the first thing our eyes are drawn to when viewing this type of radio, especially when displayed on a shelf. *Nothing* should be thrown

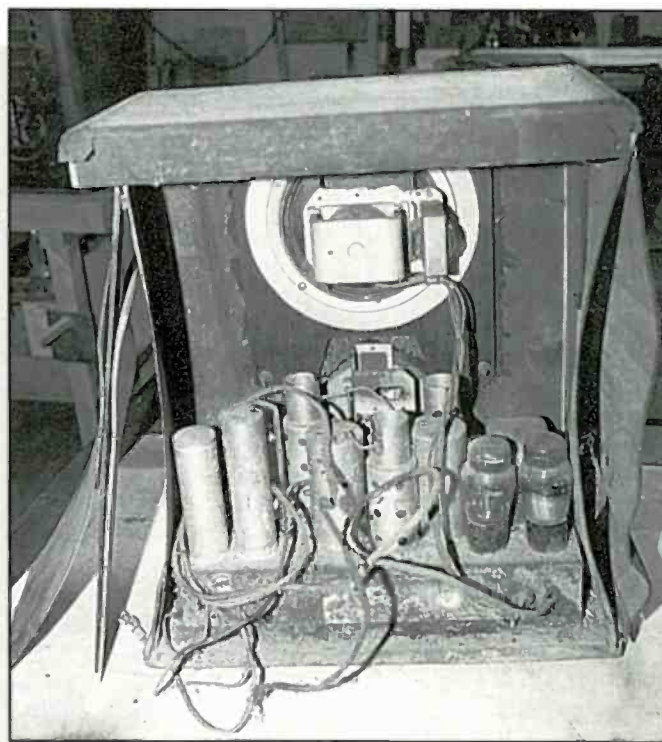


Photo 2. Decades of abuse, probably 50 years or more, have done little for the chassis and other metal components.

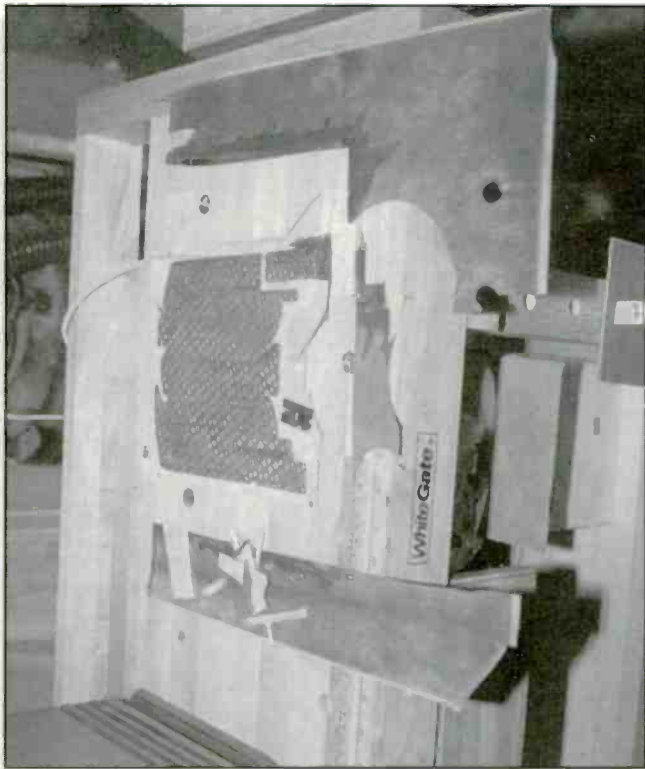


Photo 3. The front panel components are salvaged for reuse as needed.

Photo 4. More cabinet components being salvaged. ↓



away; any of the scraps and tidbits might end up becoming useful templates when cutting or building new replacement parts. As a first step, I carefully disassembled the various components making up the cabinet sections. After soaking the front panel in an aluminum baking pan full of warm water for an hour or so the glues holding the oak burl and walnut veneers softened, freeing them from the base core. Once the veneers are free, take the time and remove all traces of the animal hide glues from any of the veneer sections you are salvaging. It's often as thick as old wallpaper paste! I use a single-edged razor blade as a scraper to remove most of the gunk in those instances, followed by a finishing rinse in clean warm water. The speaker grille cloth was glued to the backboard, and it too was freed during the warm water bath. The cloth was carefully air dried and placed aside in a safe location. **Photo 5** shows some of recovered materials that comprised the front panel.

Wood Veneers

The Bosch's cabinet veneers are over thicker core section, followed by applications of an equal number of thin veneer layers on both sides of the core. The core is usually made of poplar or some other structurally sound — albeit inexpensive

— wood with little decorative value. The average core thickness is about 1/8", but this may vary from set to set, or a core may not even be used in inexpensive sets, especially those with many steam-pressed curves where a thick core would create problems.

This balanced construction is done for several reasons: the alternating grain patterns provide strength and stability, which is further enhanced by the symmetry of the panel veneering on both sides of the core. Ideally, a restorer would attempt to emulate the original panel construction by replacing the damaged layers on a *one-by-one basis on each side of core*. I am neither patient nor an accomplished woodworker — thus, I took several shortcuts to expedite my restoration. The Bosch was my first attempt at veneering, and was intended to be a learning experience for future projects. Just do the best you can, and jump in using an inexpensive set to practice on. Note that the Bosch, despite with the large amount of damage, was an ideal candidate for a beginner thanks to the square cabinet design and lack of curved sections. Here's is a good tip: whenever saving pieces of delaminated veneers you may find the veneers used inside of the cabinet match the wood used on the outer shell. This means that sections of veneer from the inside of the cabinet will often provide

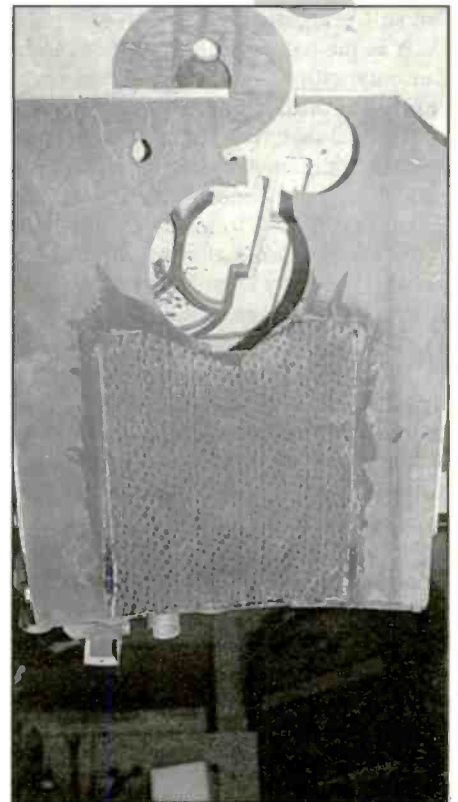


Photo 5. The rear ply of the front panel holds the radio's grille cloth. Soaking everything in warm water until the glues are weakened, thus releasing the material, salvages this. Note the center core of the front panel in the background — this is a vital component that will aid our restoration.

exact matches for patches to repaired missing chips on the exposed veneer.

Here's another tip: never discard an old radio cabinet without first saving the veneer. This is easily to do — simply place some water in the bottom of a large plastic garbage bag, put the cabinet in the bag, seal it with tie wrap, and put everything out in the sun on a very hot summer day. In a day or two the veneers will be falling off, ready for harvesting and reuse. I learned this the hard way — I left a small Philco in a closed car, on a damp seat after a rainstorm on a steamy hot summer's day, and found the set in pieces the next day. Duh!

One reason radio cabinetmakers favored this sort of construction was assembly speed. The veneers were made pliable and shaped while being moistened in giant steam presses to produce the curves in gothic cathedral cabinets, or the waterfall style large flowing curves found in other deco styled cabinets.

Types Of Veneer

There is a popular misconception that veneer is used only on cheap furniture to hide an underlying foundation of inferior woods. Nothing could be further from the truth. Veneering allows the cabinet maker to produce intricate inlay patterns, and furniture with exceptional dimensional stability, and also to show off exotic hardwoods, burls, and patterns that would be impossible or prohibitively expensive to duplicate using solid-core construction.

Most of the wood types found in early radio cabinet veneers are still being made today. An exception is some of the burls, such as the oak used in the American Bosch. It can be found, but only with some difficulty; and may not be available at all times. I'll discuss sources for veneers and some of the techniques and materials for applying veneers in my next column. Walnut is the most commonly found veneer I've found in my sets. Philco and Zenith at times used very inexpensive veneers for their cabinets, followed by a decorative paper application printed with a fake wood grain pattern. These are *photo-etched* finishes, and any attempt to remove the old lacquer finish will destroy the photo-etch finish in the process. Many restorers have learned this the hard way.

This leaves three choices: Attempt to duplicate the photo-etch finish using fine-tipped markers or grain pens, replace the photo etch using a heavily grained wood such as zebra wood veneer, or simply use a heavy toner to mask the lack of grain detail. This was a common practice in many cheap early sets where a very dark lacquer hid the cheap wood beneath. If you're artistic, the fine-tipped marker approach can do wonders! We'll discuss lacquers, toners, and dyes in our next column. Lacquer is the *only* proper finish for most sets made in the 1930s or later. Manufacturers preferred lacquer since its drying time is almost immediate; a boon to assembly line techniques. Whatever you do, please never, never polyurethane a radio cabinet!

My front panel replacement for the Bosch started with my gluing the salvaged core section to a thin piece of walnut plywood. This was purchased as scrap when a local cabinet shop closed its doors. This was real thin three-ply stuff, which I surmise was used for drawer bottoms. White woodworkers' glue was used, and the pieces were clamped until dry as shown in **Photo 6**. Use wax paper as needed between your clamps and work. Please don't glue the clamps to the work.

Next, I duplicated the side panels using the same type of walnut plywood that was used for the front panel. The core from

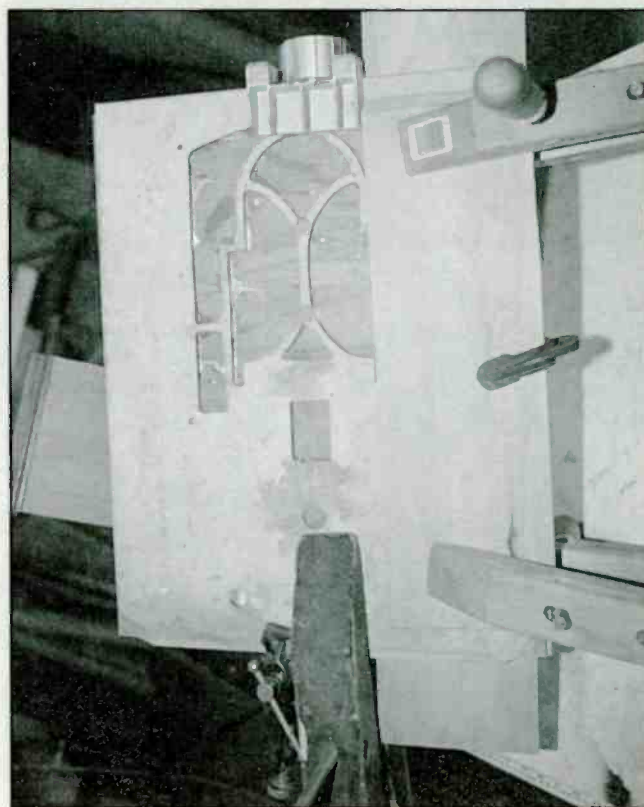


Photo 6. The front panel core is rather weak and flimsy, so it is strengthened once it is glued to a new backing of three-ply walnut plywood. Here the various pieces are clamped as the wood glue is allowed to set.

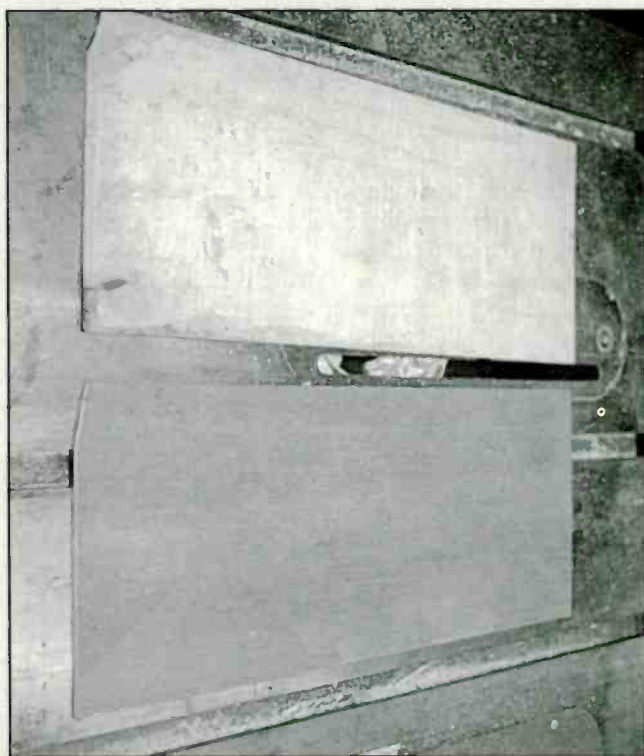


Photo 7. The original core salvaged from one of the side panels serves as a mirror image template for the right and left hand sided replacements which are cut from three-ply walnut plywood.

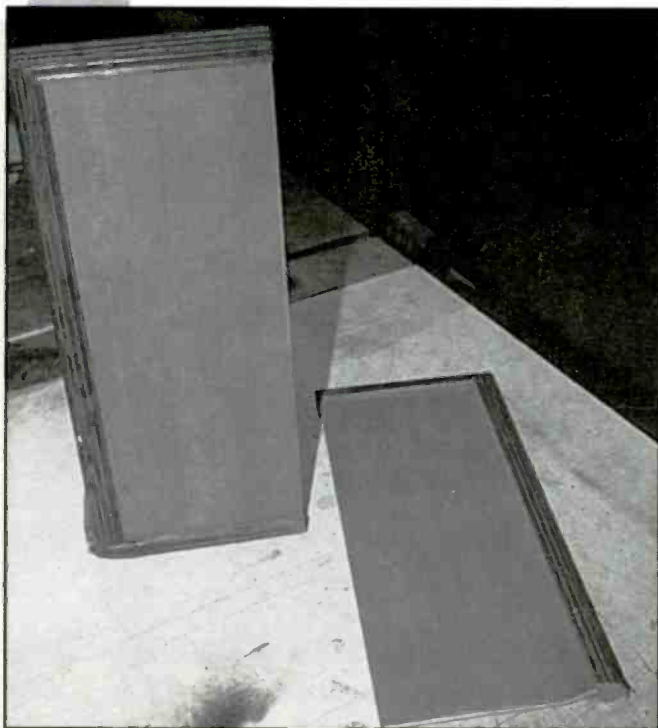


Photo 8. After pieces are cut, they are sanded to thickness so they fit back into the slits of the side rails and wood base. Feathering the edges allows the extra thickness of the finish veneer layer to be added later.

Photo 9. The top veneer core is also used as a template when cutting the new top panel. ↓

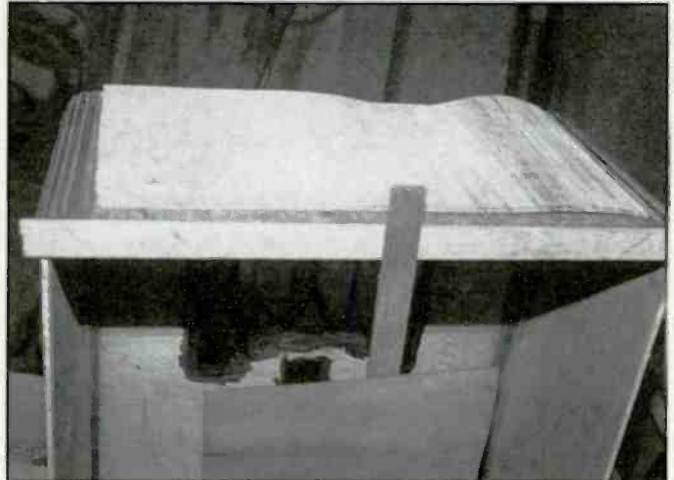


Photo 10. Constant rechecking, and using a square will ensure everything will fit as intended when the final glue-up takes place.

one of the original side panels served as my template to cut the new panels to size, as shown in **Photo 7**. By now it's possible to see how things fit together, and the new front panel and sides were test fitted as shown in **Photos 7 and 8**. A new top panel was cut, and as with the side panels the original veneer core was used as a

template; see **Photo 9**. **Photo 10** shows the cabinet rear. The carpenter's square ensures everything is lining up true before committing and the final cabinet assembly and gluing. **Photo 10** also shows some triangular wood braces I added which are glued along the junction of the front panel and baseboard, and also between the side, top and adjacent panels to strengthen the end product. A good idea? Yes and no. The lower blocks prevented the chassis from sliding in the required amount. This lack of planning required some expletives and carefully applied wood chiseling to make it right. Measure twice, cut once.

One problem with my method of panel reconstruction is that my replacement panels are thicker than the original true balanced-ply construction used in the original factory veneered sections. I needed to sand the panel edges so they would be thin enough to mate with slots in the side rails and baseboard to accommodate the extra thickness once the final decorative veneer was applied. I used an additional veneer over the walnut plywood sides and top since I wasn't satisfied with the walnut grain pattern on the plywood. Luckily, I was able to reuse the original factory veneers for the front panel! That really added to the appearance of the radio, in my opinion. The decorative sidepieces on the front panel were oak burl, something not commonly available today. After the veneers were freed from the original Bosch front panel core and still wet, any

remaining residual original animal hide glue was washed off of any of the veneers that were intended be reused. It's also important that the veneers be pressed flat — between layers of wax paper — and



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Photo 11. The original oak burl and walnut veneers are reapplied to the new front panel.

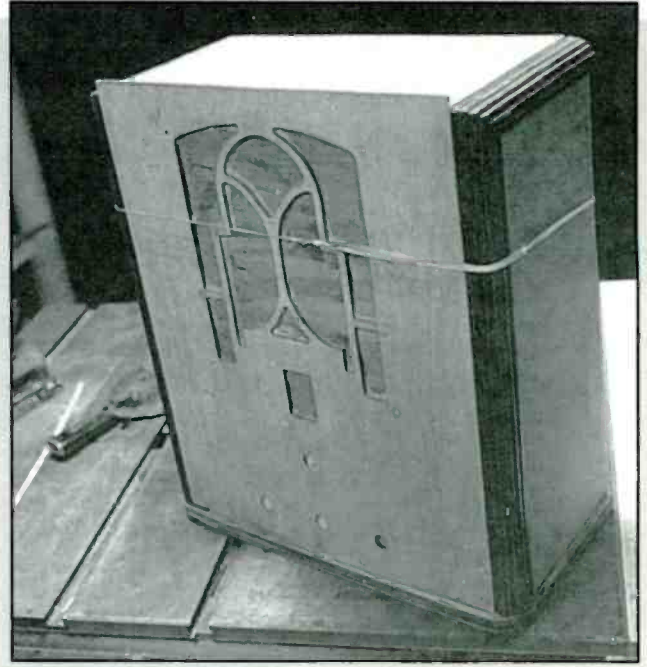


Photo 12. The original front panel core provides a guide, or pattern, for the router bit to follow when cutting out the speaker grille fretwork.

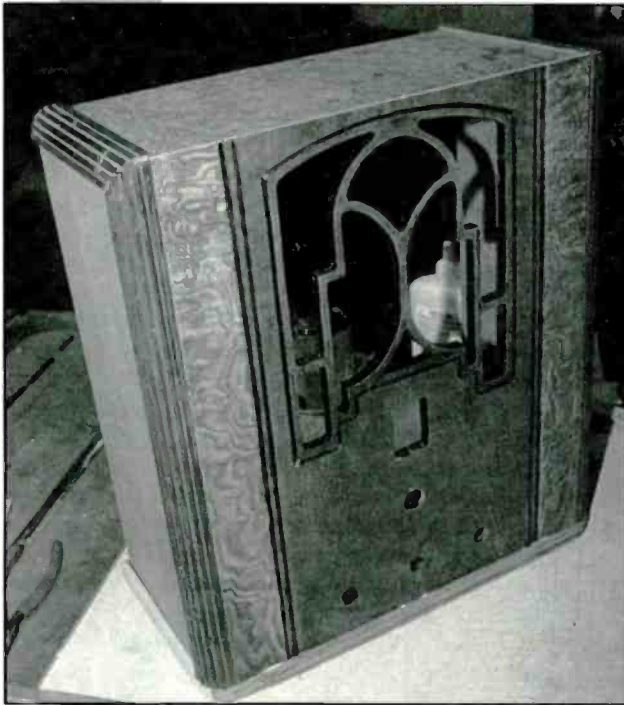


Photo 13. In this mockup, the fretwork has been cut, and final fitting is taking place. Note that the bottom board still hasn't been fully restored — the radio panels overlap the baseboard, which was trimmed to eliminate rotted areas.

allowed to *fully dry* before being reapplied. If still damp, they will eventually develop splits or rifts since the wood will shrink, and this will ruin your work. You will have to go back and fill the cracks with furniture touchup pencils if it happens to you. Burls should be glued using white carpenters' glue. As

you can see, the front panel is starting to look fairly decent by the time **Photo 11** was taken.

The Tricky Part

The trickiest part of the whole front panel restoration was reproducing the intricate cuts in the speaker fretwork. I suspect this was done by punch presses at the factory. My only recourse was to use a small router. The wood core will serve as a guide for the router bit to cut out the new material. Unfortunately, most router bits designed for pattern work use a fairly large diameter ball-bearing raceway as a guide, which is far too large to accurately follow the narrow crooks-and-cranies of the Bosch's fretwork. I found a Bosch — rather apt — router bit that was made for cutting laminates. This bit is about 1/8" in diameter, and has a small cutting area offset from the end of the shaft. By carefully positioning the router cutting depth, it was possible to place the cutting area of the bit on the new woodwork, while the bare metal shaft was allowed to rest on and follow over the pre-cut core area. **Photo 12** shows the core glued over the new three-ply backing, and illustrates the intricate cuts that need to be made.

Cutting the fretwork required some skill. Going too fast, or lingering in one area too long, would allow the rapidly turning router bit shaft to burn into the soft core wood being used as a guide. This would result in a slight unwanted gouge being cut into the new wood. By the time **Photo 12** was taken, everything was starting to look pretty good. In this photo, the original veneers have been reapplied. Unfortunately, the new front is considerably thicker than the original, but this is a trade-off I was to accept as a part of my learning curve. It is something that most people would never notice unless it was pointed out.

Well, this column has exceeded my allotted space, so this is a good time to wrap things up. Next month we will continue with how and where to buy veneers, and how to apply lacquer and toners. See you next time! ■

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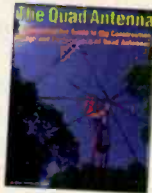
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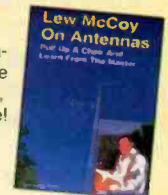
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Prestone's "Jump It!"

They're in all the automotive and department stores, in various catalogs, and all over the Internet. And frankly some of these 12 Vdc portable power supplies are better — and much worse — than others. I've had the pleasure of using the Prestone Jump It! portable power unit for a while and, in short, it's fantastic!

Right off the bat, it's important to know that you're not going to get "Warp Speed" from a four-cylinder car — and you're certainly not going to get mega-watt power from *any* portable power pack. But you will get more than enough power to run small wattage lights, TVs, camcorders and yes, your radios.

The Prestone Jump It! unit is one hefty package, weighing in at 18 lbs. The sealed lead acid battery requires an initial 24-hour charge to bring the battery to full capacity. It comes complete with a 12 Vdc wall charger. The Prestone folks must know radio people and about all those 12 Vdc adapters we store in drawers and boxes. With the Jump It! there's no excuse about losing their small wall charger. The handy compartment on the back of the unit conveniently stores the charger (and there's even enough room for your small 12 Vdc radio-to-power pack

cord or dual cigarette lighter receptacle) when transporting or temporarily storing the pack.

Charging the unit after that initial 24-hour charge is simple; you can keep it plugged into the AC outlet, unplug it and use it routinely, but be sure to top it off every couple of months — especially during the summer months — to maintain full efficiency. Pushing and holding the red button on the front of the unit activates the battery condition meter. Fully charged, the needle deflects into the "full" portion of the meter. I check the battery's condition periodically during the charging process and several times during actual use.

Standard procedure, even for a power supply or other radio accessory, should always be to read the manual. (Most companies will tell you that the majority of their customer inquiries or troubleshooting problems would be solved if the user would first read the manual!) The Prestone manual — all 10 pages — is well written and includes the standard precautions and instructions about lead acid batteries, connections, and charging. Follow the directions and it'll work just fine.

Speaking of working just fine, that's my overall assessment of this superb power pack. Just like Prestone thought about stor-



The Prestone Jump It! operating a PRO-43 scanner.



The rear of the Jump It! has a handy compartment that holds the included AC adapter with ample room for your small 12 Vdc radio-to-battery cord.

ing their wall wart adapter, they've thoughtfully provided a small light on the front of the unit, which you can keep lighted during emergencies by simply pressing the small yellow button. Flat tire? Dead battery? You've now got enough light to fix the tire or connect the provided heavy-duty battery cables to your dead battery for a quick and easy jump-start! (Again, refer back to the manual, please). You'd turn off the vehicle and all accessories, connect the red "positive" clamp to your car's positive battery terminal (or remote terminal), then connect the black "negative" clamp to a non-moving metal part of the vehicle. Wait a second, start the vehicle, then disconnect the black "negative" clamp first, return it to the handy holder on the Prestone unit, then do the same with the red "positive" clamp.

Jump It! And Your Radios

Right now I'm using my MFJ-9420, 20-meter amateur transceiver, which draws about one amp on transmit and virtually nothing on receive. It's been plugged into the Prestone Jump It! for about two hours or so and the battery condition meter hasn't changed. I've had two short QSOs in the past half-hour. Initial battery voltage was 13.49 Vdc, and now it's 13.25 Vdc. There's no noise or distortion on my transmitted signal or on the received signal. Turning up the volume on the radio while holding in the

meter (and believe me, the MFJ-9420 has plenty of volume!) doesn't drain the battery to any noticeable extent. I also used my RadioShack PRO-43 scanner with the Prestone unit for a whopping 38 hours before recharging the Prestone battery. That's a lot of listening!

Prestone's manual says that using the provided 12 Vdc cigarette lighter receptacle you can run a nine-watt depth finder for about 21 hours, 15-watt spotlight for 12 hours and a four-watt fluorescent light or cell phone for about 30 hours. Besides running my QRP ham rig and scanner, I used a 7.5-watt AC night-light (plugged into a small power inverter connected to the Prestone) for exactly 25 hours, a 25-watt bulb for 10 hours, and a small portable fan for about six hours before the battery needed to be recharged. Remember, of course, that your mileage may vary. You won't be running that circular saw or your wife's blow-dryer with the Jump It!, but it'll certainly get you through a one-day power outage, an overnight camping trip or that special time when you need to get on the air quickly with portable 12 Vdc power. Grab the radios, your Prestone Jump It! and run!

For more information on the Prestone Jump It!, that sells for about \$80, contact the company directly at 888-350-8785 or visit the Prestone website at www.prestone.com. Please tell them you read about the Jump It! in *Popular Communications*.

v.i.p.

spotlight

Congratulations To Johnny Knight Of North Carolina

Popular Communications invites you to submit, in about 150 words, how you got started in the communications hobby. Entries should be typewritten, or otherwise easily readable. If possible, your photo (no Polaroids, please) should be included.

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The person whose entry is selected will receive a one-year gift subscription (or one-year subscription extension) to *Popular Communications*. Address all entries to: "VIP Spotlight," *Popular Communications*, 25 Newbridge Road, Hicksville, NY 11801 or E-mail your entry to popular.com@aol.com, letting us know if you're sending photos. If you're E-mailing photos, please send them in a separate E-mail with your name in the "subject" line.

Our September Winner: Johnny Knight

Reader Johnny Knight, WB4U, of Monroe, North Carolina, says, "It all started when I was eight years old. Someone, a



Pop'Comm reader, Johnny Knight in his superb radio room!

relative or family member, gave me an old tube AM/SWL receiver that no longer worked (it had no cabinet, just a bare chassis with tubes all aglow). I tinkered with it and got it working (it had a broken speaker connection). Alone, late at night, with that receiver I discovered that there was a world out there beyond what I had known in my eight years. I began DXing the AM BC band because I couldn't understand much of what was on SW. I loved to listen to WLS out of Chicago, WABC in New York, and many others. Later, I did learn a bit about the SW bands and listen regularly to the BBC and RCI. I still love to DX the AM band and like to listen to the content of many of the all news/talk stations. That first radio led me into a career in electronics and radio and eventually to my ham license. My main receiver is a Kenwood R-5000 with a RadioShack DX-392 for portable work. I got into scanning in the early '70s and can't get enough now. I currently own seven scanners with the Uniden Bearcat BC 9000 XLT and RadioShack PRO-2006 as the main workhorses." ■

Getting Started: Answers To Common Scanner Questions

I get a lot of letters asking what most of us would consider beginner questions — things we all know after scanning for a while, but things that are a mystery to someone just starting. Some folks are just joining the hobby, while others have decided to find out why their shortwave receiver dial stops at 30 MHz. I'm always happy to get your letters, and rest assured that I do read them all. Unfortunately, there isn't time to answer them all personally (particularly with last minutes jaunts to Poland and other places that old "Travel Agent but no Directions" Harold keeps scheduling), although I do try. I'm always glad to receive them, and encourage you to continue asking all forms of questions from beginner to advanced. In the meantime, I thought we'd take a quick look at a few questions that I've seen several times recently. Sometimes it's a good idea to review, even if you've been scanning for a while.



While these old scanners make excellent receivers, you just can't teach an old dog new tricks. Expanding the frequency coverage of these older units is difficult if not impossible, and even when you can do it, the results are often much less desirable.

Scanner Upgrading

One question that I've been seeing a lot goes something like this: "I have a (put your older model scanner in here) and would like to add (more channels or more frequency coverage, pick one or both) to it." While I'd love to have a quick and easy answer for this, my real recommendation is "don't."

Scanners are built from the ground up to cover a certain frequency range. Recent changes in the laws governing the manufacture of receivers dictates that they be intentionally difficult to modify. But even older scanners, expanding the frequency coverage to include a band that it wasn't built for is almost impossible. There's one exception — you can get an external conversion box that will receive the frequencies you're interested in (say the 800-MHz range on an older scanner that doesn't include this area) and translate them down to a frequency range that your scanner does receive.

Unfortunately, the Electronic Communications Privacy Act of 1986 and amendments have made these converters illegal to manufacture as well, so you'll have to find a used one or build your own. Ramsey Electronics (www.ramseyelectronics.com) does build a converter kit that will convert some shortwave frequencies down to the AM broadcast band, and there are aircraft converters to add that coverage if your scanner doesn't already have it. Outside of this external modification for frequency expansion, I find it hard to recommend that you even try.

Adding memories is a bit of another issue. The same "tamper proof" security that is in most of the newer scanners to keep you from messing with them will also keep you from doing much to expand the channel capacity. At one time, there was an excellent series of books published by Bill Cheek regarding modification of the PRO-2004, 2005, and 2006 series of scanners from RadioShack. Many of these scanners are still in use

and floating around flea markets, but they are no longer available as new. I believe one of the modifications that was published allowed for up to 64,000 channels from a 400-channel scanner. Not bad, if you're handy with a soldering iron. Unfortunately, no scanner since has been as easy to modify, and very few modification instructions are published for newer equipment so you'll have to live with the designed specs.

Or make sure you get a scanner with a computer interface. You can use the computer to make up for the capabilities that



If you want to listen to these guys, you'd better make sure you have the right radio! Increasingly, the so-called Military Air Band (220–380 MHz) is only available on high-end receivers.

the scanner lacks. This has some disadvantages, particularly when it comes to portable operations, but it also has some major advantages. Being able to quickly reprogram the scanner, or scanning frequencies that you don't normally listen to just to see if there's activity are a great asset to your scanning arsenal.

Outside of these two simple additions to your scanner, my recommendation would be to replace it with a newer scanner that has the performance and features you want built in from the factory. Of course, one of the big reasons for wanting to upgrade your scanner is that your favorite agency has just gone to a new band, and possibly a trunked or digital system. Right now, there is no solution for digital systems, but there were hints at Hamvention 2001 in Dayton this year, as well as other places on the Internet that a digital scanner is in fact in the works, and could be available as early as late this year, or next. Keep your eye on "Overheard" for upcoming developments.

There are, however, many solutions available for trunking, which will outperform any modification you could do on an existing radio. So, with that in mind, our next question (and the most frequently asked question) is "I want to get a scanner, but don't know what kind of radio I need."

What Kind Of Radio Do I Need?

So I've convinced you not to try to modify your existing scanner, or you're just starting out and need to buy that first radio. Which radio should you buy? Why are there so many models? What kind of car should you buy? It's about as complicated a choice, although the cost of the radio (particularly scanners) isn't quite as high as a car. Just like cars, there are a lot of choices, and a lot of things to consider.

Probably the first question you should ask *before* you ever go shopping is what you're going to do with this radio. Do you want a portable that's convenient to carry around, or would a base or mobile unit serve your needs better? All factors being equal, you should get slightly better performance from a base or mobile. Key word there is "should." In theory, because of the additional power available, and a steadier source of power, as well as the possibility of better performance from the antenna system, it "should" work that way. Having said that, the reality is that there are many handhelds that can perform just as well or better than their base/mobile counterparts. It probably shouldn't be much of a factor in your decision making process. Concentrate on how you want to use the radio, and then make your selection accordingly.

Probably the next question you need to answer is about trunking. If you live in an area where the things that you want to listen to use a trunking system, you'll want a trunking scanner. Increasingly this is becoming a key factor in picking that new radio, and in causing folks to start searching for new receivers.

Trunking is a way of managing frequencies with a computer

system to give an agency the appearance of having many more channels than it actually has. But they are very difficult to listen to unless your scanner can follow that particular type of system.

How can you tell? The best way is to ask another listener who's been at it for a while. If you can't find anyone to ask, there are a couple of ways to get indications at least of whether or not you should be worried about a trunked scanner. The first thing to try is getting a list of frequencies (buy a copy of *Police Call* at your local RadioShack if you can't find a proven list from a local source). Look up the city that you are interested in listening to and then have a look at the frequencies. *Police Call* can sometimes tell you which frequencies are used for police/fire/ambulance activity and sometimes it does not have that information. If the frequencies are in the 861 to 869 range (designated as output frequencies for trunked systems) there is a strong possibility of trunking. Right now, if the frequencies are in other ranges, you're probably safe — for now anyway. If they are in the 800–900-MHz range, and if there are a group of them, (5–60 will be listed in *Police Call*), there's a very good chance that the system is trunked. Now you will have to find someone to ask, or make sure you buy your scanner someplace that will accept a return if it's not compatible with your local system.

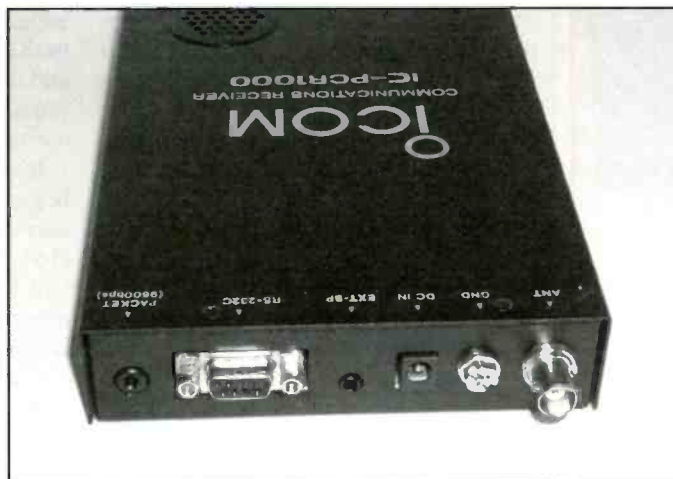
The most common systems in use are the Motorola (type I and II), Astro, Ericson's EDACS system, and Johnson LTR. Johnson LTR is very rarely used for public safety, although that may change with an upgrade to the LTR system. Motorola type I and II can be followed with a

number of radios, but still a limited number. They include the newly introduced Bearcat 780 and 245, the RadioShack PRO 92, 94, 2052, and 2067. There are other combinations of radios, computer interfaces, and software that will also accomplish the task, but you'll have to know enough to assemble all the pieces and make it work. The systems I mentioned above are self contained and complete from the manufacturer. Astro is a system that can also carry digital modulation, and can't be monitored with today's equipment.

If you don't have a trunking system to contend with, your choices are much more extensive. Don't rule out the trunktracker scanners just because you don't have a trunking system in your area yet. They are all above average conventional scanners as well, and if a trunking system ever arrives, you'll be all set.

Other Features

If you live in an urban area that is likely to have a lot of radio users around you, or as it is often referred to, "an RF rich environment," then the selectivity and dynamic range of the radio will be important considerations. What all this means in English



Radios like this computer-controlled PCR-1000 from ICOM offer many additional features by way of software control, but you give up any hint of portability. This has become one of my favorite receivers for travel because of its size and features. . . it fits right in the case with my laptop!

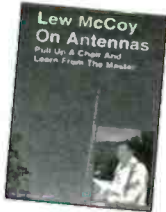
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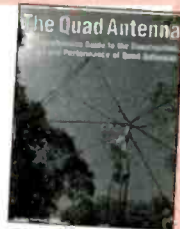
Usually **\$15.95**

The Quad Antenna

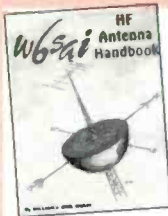
by Bob Haviland, W4MB

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is that if you don't want to listen to a bunch of interference from pagers, commercial users, and cell phones, you'll want a radio that's fairly high end. On the extreme, you'll need something called CTCSS or DCS to cope with the interference.

How high end? Well, that's a very difficult question to answer. In fact, while the high-end scanners tend to be built a little better and be more resistant to interference, it might be that in your particular situation, some other radio works better for some reason. If you're unsure, it's best to buy from someone who will let you return it in a few days so that once you get it home, you can do some actual scanning and find out how interference prone your area really is. If that radio doesn't work quite right, try another model. Design differences often allow one model to perform in one place while another model might be much better only a few blocks away.

Of course, the more expensive the radio, the less likely we are to have the problem in the first place. It's also worth noting that there is no "perfect receiver" that won't get interference at any time on any frequency. Don't waste your time looking — just find something that's acceptable to you on the frequencies you listen to and enjoy the hobby.

Generally speaking, more memories are a good thing, but there is a point of having too much. Really, it's not memories we need as much as banks. Banks help to organize groups of things that belong together, such as all the police, or fire channels, or perhaps all the south side and all the north side. Most scanners on the market today (except for the very few that have less than one hundred channels) will be divided into at least 10 banks. A 200-channel scanner is likely to have 10 banks of 20 channels each. That's probably enough for most applications. Twenty banks of 10 channels would be more versatile than the 10-bank system we were discussing, but you can't

always have everything at a price we're willing to pay for a scanner.

Frequency coverage is another thing to watch, particularly on the introductory models. Most of the high-end radios will include the standard VHF-Lo, High, UHF, and 800MHz ranges. Some offer continuous coverage from the shortwave bands through one or two Gigahertz. However, some of the introductory models leave out an area or two, usually at the high or low end to cut costs.

One particular radio that comes to mind (and now is discontinued) is the RadioShack PRO-23. On the surface, it looked like a great introductory radio and included the 800 MHz range. It wasn't until a week or so later when I decided to add the state highway patrol frequencies to a bank that I found out it did not include the VHF-Lo range. Oops.

It's also worth noting that we will soon begin to see some public safety frequencies being assigned in the 700-MHz (764-806 MHz) range in the not too distant future. The FCC has approved the allocation, and a few stations have been licensed. In many areas of the country, it is simply a matter of waiting for existing services to relocate. Currently, only the continuous coverage scanners and the BC-780 include this range. It is also likely that trunking will be the normal mode of operation in this range, although conventional operation is permitted. No doubt, new models will appear as soon as the band becomes common, but if a service you're interested in moves, that won't be much help.

Some of the newer radios include the ability to store an alphanumeric label (or alpha tag, as they're called) with some or all of the memories. This feature tends to appear mostly on the higher-end models, but can be worthwhile in a larger scanner. Remembering what frequency goes with what over 500 or 1000-channel is downright difficult, even if you have a good

The Adventures of Scanner Dweeb
by M.A. Coletta

I'm tired of being a dweeb... I'm gonna do something drastic....

What did you do... save the world?

I'm back... No.. I got a tattoo

www.ScannerDweeb.com

Easy Scanner

memory. It's also available on computer systems for any of the computer-controlled scanners, which makes data entry much easier.

Another extremely useful feature is selectable delay. Almost all scanners today have a delay function that will cause the radio to pause for a few seconds before continuing the scan to see if a reply is received on that same channel. On many radios, this feature is either on for all channels or off. Again, on the high-end units, you can turn this feature on and off per channel, so that you can customize your scanning to the agencies you're listening to and your preferences.

Scanner Antennas

Once you've got the radio, don't forget the other important piece of the puzzle. How much antenna you need depends largely on where you are located and what you are trying to listen to. It's beyond the scope of this article to explain much in the way of antenna theory or even specific recommendations, but we can give you a few things to experiment with. We'll take a much more detailed look at antennas in an upcoming column.

If you're located in an "RF rich environment" and already having trouble with overload or interference, increasing the antenna performance will only make things worse. The first thing you should do, particularly if you are just getting started in scanning, is to see what the radio can do right out of the box. Almost all scanners, even base units that are intended to be used with larger antennas, come with some sort of small, easily attached antenna. Sometimes these mount right on the back of the radio and are easy to set up. Give it a try. You can always upgrade your antenna situation later if you're not hearing the things you want to.

Of course, most handheld radios come with an antenna from the manufacturer. And on most radios you should do well to replace it. The manufacturer includes the antenna as a convenience, not as a performance enhancement, and the antenna is likely to work across the range of frequencies that the scanner covers — equally poorly. If you only listen to frequencies in one or two of the bands, you will do well to replace the antenna with something more specific to those bands, or with a better grade of "all-band" antenna. I put all band in quotes because there is no such thing as a truly all-band antenna. You'll have to do some experimenting and see what works best on the frequencies you listen to and on your radio. Once in a great while, you'll find out that the antenna that came with the radio does in fact perform better than the aftermarket ones on a particular radio.

Frequency Of The Month

Our frequency this month is — your choice. Send in your favorite frequency and what's on it. We'll pull out a lucky winner for a one-year subscription or extension. I promise that very soon we'll spend a good part of a column reporting all the great things you've been sending in lately. Keep it up!

Your Turn!

What have you found in your area that's not published? Have a question related to scanning? Send them in to Ken Reiss, PMB 309, 9051 Watson Rd., St. Louis, MO 63126-2220 or via E-mail to armadillo1@aol.com. Until next time, good listening! ■

pop'comm survey july 2001

Circle Reader Service

1. I have cable or satellite TV in my home

- Yes 1
- No 2

2. I receive broadcast TV with an outside antenna

- Yes 3
- No 4

3. I use a radar detector

- Yes 5
- No 6
- Never considered using one 7

4. In a typical week, how much time do you spend listening to your AM/FM news station?

- Less than an hour 8
- About an hour 9
- More than two hours 10
- Three or four hours 11
- More than four, but less than eight 12
- More than eight hours 13

5. I live in the following type of community

- Under 2,500 14
- 2,500 to 10,000 15
- 10,000 to 30,000 16
- 30,000 to 50,000 17
- 50,000 to 100,000 18
- 100,000 to 250,000 19
- 250,000 to 1,000,000 20
- 1,000,000 and above 21

6. I'm married and my spouse is also interested in radio monitoring

- Yes 22
- No 23

An Exclusive Look At Alaska's Pink Book

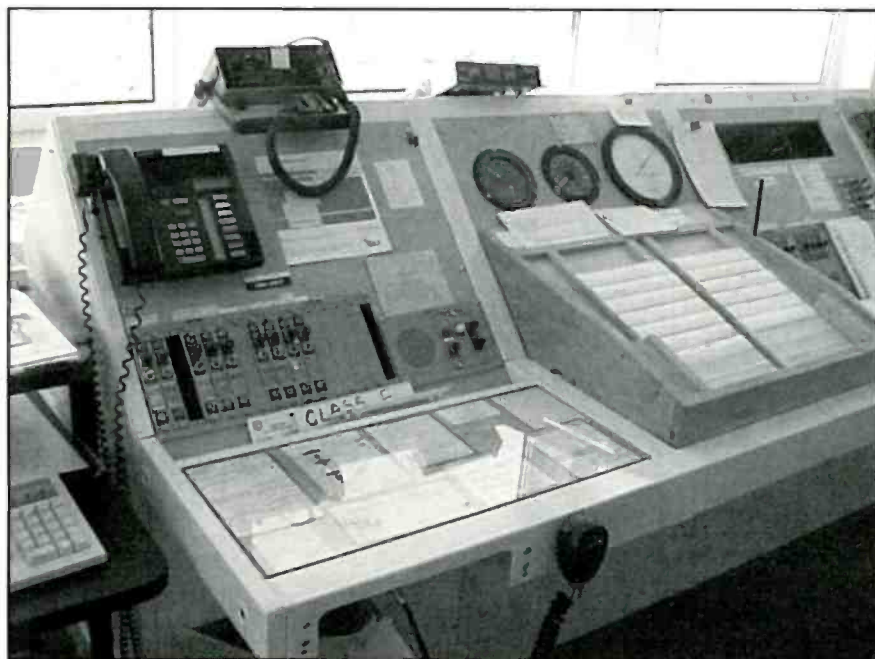
When you think of Alaska many things come to mind — moose, caribou, grizzly bears, Mt. Everest, the Aurora Borealis, snow, the midnight sun. The list can go on ad nauseum. On thing that normally does not come to mind is aviation monitoring. After all, Alaska is the most sparsely populated state in the Union. However, Alaska is unique in the aviation community because of the wide variety of aircraft and their destinations. Granted, many states may have more aircraft, but I am not aware of any airport outside of Alaska (and I expect to be corrected by the readers) that has hard surfaced runways for use by regular aircraft, a water runway for use by floatplanes, and a special winter runway for aircraft equipped with skis. Yet this is what greeted me upon my arrival in Fairbanks (FAI) this past April. They have hard surfaced runways 1L/19R and 1R/19L, 1W/19W for use by amphibious and float planes (there are differences) in the summer, and 1/19 for ski-equipped aircraft in the winter.

fact that many of the controllers at the flight service stations will rotate part of their duty at manual flight service stations. For example, some Fairbanks AFSS controllers spend part of their duty time manning stations at Barrow (BRW), Deadhorse (SCC), Nome (OME), and Kotzebue (OTZ). These facilities are opened roughly 15–16 hours daily, but all year. The other FSS operated by Fairbanks is here in Northway (ORT). (Harold Ort, *Pop'Comm* editor, gets a kick out of the airport identifier.) Northway is scheduled to be open from 6 a.m. to 9:30 p.m. from March 1 to September 30, but this year and last it was opened on May 1. We are manned here with two controllers from Fairbanks who rotate in and out, and two controllers from elsewhere (and this year it is elsewhere) — me from St. Petersburg, FL (PIE) and one from Honolulu, HI (HNL). (Note: there is a Honolulu, AK between Anchorage and Fairbanks.)

Northway is a small town of approximately 150 people located about 45 miles northwest of the U.S./Canadian border and about seven miles off “the Alaska Highway.” The highway, formerly called “the Alaska/Canadian Highway,” or Alcan for short, was built by the U.S. Army during World War II in anticipation of a Japanese invasion and to help supply the Russians in their war effort by ferrying equipment and aircraft. On display today at the airport is the broken propeller from a Bell Aircobra that crashed near here while being ferried to the Russians. Nowadays Northway serves as the first airport in Alaska for people flying small single and dual engine airplanes and helicopters. As such, U.S. Customs is here waiting for these pilots whose last stop in Canada was Whitehorse, Burwash, or Beaver Creek. Because towns and airports are few and far between while flying here, it is also unofficially called the world's longest emergency landing strip.

One of the toughest things to get to use while monitoring military aircraft in the “lower 48” is a list of military frequencies. While many books are out there, much of

what is available to the general public is for civilian and commercial aircraft. Readers may remember the Airport/Facility Directory (A/FD) I recommended last year — the “green book.” The “green book” for Alaska isn't green. It's more of a pink book, but it contains even more information than what is available in the A/FD. Here it is called the Alaska Supplement. Even though the format is virtually identical there is more info than in the A/FD. As you may recall the A/FD's at each revision are receiving more and more airport layouts. The Alaska Supplement is virtually complete with them. In addition you also get all military UHF frequencies that are in use for the airport, approach or center.



The Northway ESS.

In spite of this there are very few airports in this state with airport traffic control towers, fewer approach controls, and only one air route traffic control center, in Anchorage (ZAN). However unlike the “lower 48” there are numerous flight service stations. There are three automated flight service stations (AFSS): Juneau (JNU), Kenai (ENA), and Fairbanks. It's the



Pilatus Porter aircraft landing at Northway with Alaska Range in background.

Also included in the "Associated Data" section in the back is a list of Aerial Refueling tracks and frequencies. The tracks are not displayed graphically but locations of entry and exit points, using latitude/longitude are used, along with the positions using navigational aids. Plus: the frequencies — both UHF and VHF. It's definitely a treasure trove of frequencies. In the back is information on emergency procedures, including the Coast Guard's use of 8364 kHz.

Because Alaska is so unique the Sectional and WAC Charts for the state as well as the instrument enroute charts all contain the VHF and UHF frequencies. But one other item that is unique, I believe, to Alaska is the "Special Use Airspace Information Service" or SUAIS (pronounced soo-os). The SUAIS is a 24-hour service provided to civilian pilots. Its function is to assist pilots in planning flights through or around MOAs (Military Operation Areas) and Restricted Airspace in central Alaska. This service provides virtually real time info on military activity in the Fairbanks and Delta Junction areas. They also provide information on Army artillery firing and known helicopter operations. It is provided by Eielson Range Control at Eielson Air Force Base, Alaska, about 25 miles south east of Fairbanks. The frequency is 125.3 MHz. Additional information can be found on the web at: <http://www.eielson.af.mil>. It's there for the protection of the pilots, both military and civilian. I hope to get on base this year and do a bigger story on them.

Enough of what's in the pink book. Here's what's changed in your neck of the woods. See you again next month!

NEW/COMMISSIONED

AK

Kipnuk (IKK)
AWOS-3 118.325
Koliganek (JZZ)
AWOS-3 118.525

AZ

Phoenix — Williams Gateway (IWA)
AWOS-3 133.5

IN

Indianapolis Metropolitan (UMP)
AWOS-3 338 kHz
Indianapolis Mount Comfort (MQJ)
AWOS-3 124.175

MD

Salisbury — Salisbury-Ocean City Wicomico Regional (SBY)
ASOS 118.325

NC

Sanford — Lee County Regional (TTA)
Apch 132.35/256.9

OK

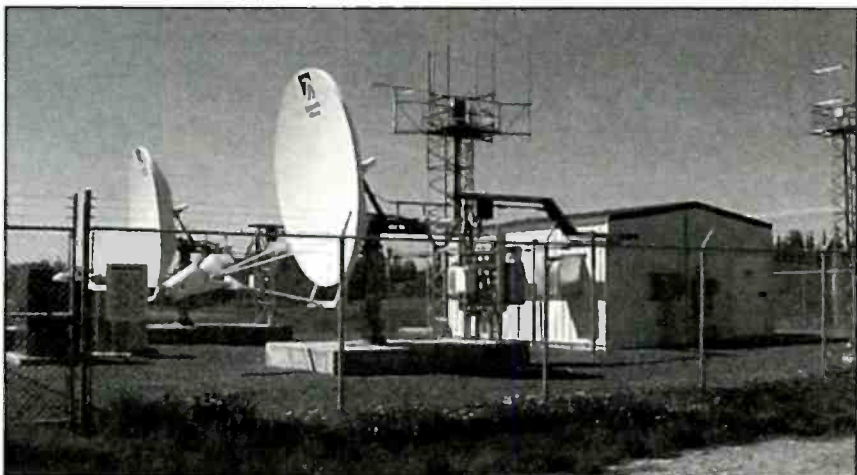
Idabel — McCurtain County Regional (4O4)
AWOS-3 120.0

PA

Johnstown — Cambria County (JST)
ATIS/ASOS 118.325

SC

North — North AF Auxiliary (XNO)
Apch 124.15
Gnd Adzy 120.475



Satellite equipment used to get weather info for pilots.

SD

Custer — Custer County (CUT)
ASOS 120.0

CHANGED

AK

Kenai FSS (ENA)
Platinum RCO was 122.45, now 122.5



Northway FSS facility.

DELETED/DECOMMISSIONED

GA

Macon — Middle Georgia Regional (MCN)
 ATIS 327.5

IL

Chicago/West Chicago (DPA)
 IKK FSS RCO 122.55

KY

Blue Grass Station AHP (LSD)
 Opns 126.2/229.8/241.0

WI

Mosinee — Central Wisconsin (CWA)
 AWOS-3 127.45

AZ

Fort Huachuca Sierra Vista Municipal — Libby AAF (FHU)
 LC was 229.6, now 284.75
 GC was 248.2, now 268.7

CA

San Diego — Southern California Tracon (SCT)
 Was 300.4, now 257.875

MO

St. Louis — Spirit of St. Louis (SUS)
 LC was 348.4, now 257.2

NY

East Hampton (HTO)
 Apch was 132.25, now 118.95

NC

Kenansville (DKA)
 NDB was 344 kHz (DKA), now 332 kHz (DPL)

OH

Paulding Airport (OH28 now 2H8)
 Unicom 122.7

TX

Houston ARTCC (ZHU)
 Alexandria LA Low RCAG was 135.7, now 127.85
 was 381.5, now 299.6
 Lufkin TX Low RCAG was 129.95, now 134.8
 was 287.85, now 269.6
 Newton TX Low RCAG was 135.7, now 126.95
 Was 381.5, now 363.05
 Palacios TX Low RCAG was 119.175, now 128.6



DOT sign at front door.



Pilatus Porter landed at Northway—notice the “Danger Keep Off” sign.

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Plug this self-contained MFJ **MultiReader™** into your shortwave receiver's earphone jack.

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Listen to maritime users, diplomats and amateurs send and receive *error-free* messages using various forms of TOR (Telex-Over-Radio).

Monitor Morse code from hams, military, commercial, aeronautical, diplomatic, maritime

Super Active Antenna

"World Radio TV Handbook" says MFJ-1024 is a "first-rate easy-to-operate active antenna... quiet... excellent dynamic range... good gain... low noise... broad frequency coverage."

Mount it outdoors away from electrical noise for maximum signal, minimum noise. Covers 50 KHz-30 MHz.

Receives strong, clear signals from all over the world. 20 dB attenuator, gain control, ON LED.

Switch two receivers and auxiliary or active antenna. MFJ-1024 6x3x5 inches. Remote has 54 inch whip, 50 feet coax, 3x2x4 inches. 12 VDC or 110 VAC with MFJ-1312, \$14.95.

Switch two receivers and auxiliary or active antenna. MFJ-1024 6x3x5 inches. Remote has 54 inch whip, 50 feet coax, 3x2x4 inches. 12 VDC or 110 VAC with MFJ-1312, \$14.95.

Indoor Active Antenna

Rival outside long wires with this *tuned* indoor active antenna. MFJ-1020B 7x9 inches. "World Radio TV Handbook" says MFJ-1020B is a "fine value... fair price... best offering to date... performs very well indeed."

Tuned circuitry minimizes intermod, improves selectivity, reduces noise outside tuned band. Use as a preselector with external antenna. Covers 0.3-30 MHz. Tune, Band, Gain, On/Off/Bypass Controls. Detachable telescoping whip. 5x2x6 in. Use 9 volt battery, 9-18 VDC or 110 VAC with MFJ-1312, \$14.95.

Compact Active Antenna

Plug this compact MFJ all band active antenna into your receiver and you'll hear strong, clear signals from all over the world, 300 KHz-200 MHz including low, medium, shortwave and VHF bands.

Detachable 20 inch telescoping antenna. 9 volt battery or 110 VAC MFJ-1312B, \$14.95. 3 1/2 x 1 1/2 x 4 in.

Plug this compact MFJ all band active antenna into your receiver and you'll hear strong, clear signals from all over the world, 300 KHz-200 MHz including low, medium, shortwave and VHF bands.

Detachable 20 inch telescoping antenna. 9 volt battery or 110 VAC MFJ-1312B, \$14.95. 3 1/2 x 1 1/2 x 4 in.

Detachable 20 inch telescoping antenna. 9 volt battery or 110 VAC MFJ-1312B, \$14.95. 3 1/2 x 1 1/2 x 4 in.



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Printer Monitors
24 Hours a Day
\$179⁹⁵

MFJ's exclusive **TelePrinterPort™** lets you monitor any station 24 hours a day by printing transmissions on an Epson compatible printer. Printer cable, MFJ-5412, \$9.95.

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You can save several pages of text in an 8K of memory for re-reading or later review.

High Performance Modem
MFJ's high performance **PhaseLockLoop™** modem consistently gives you solid copy -- even with weak signals buried in noise. New threshold control minimizes noise interference --

greatly improves copy on CW and other modes.

greatly improves copy on CW and other modes.

Easy to use, tune and read

It's easy to use -- just push a button to select modes and features from a menu.

It's easy to tune -- a precision tuning indicator makes tuning your receiver easy for best copy.

It's easy to read -- the 2 line 16 character LCD display with contrast adjustment is mounted on a brushed aluminum front panel for easy reading.

Copies most standard shifts and speeds. Has MFJ **AutoTrak™** Morse code speed tracking.

Use 12 VDC or use 110 VAC with MFJ-1312B AC adapter. \$14.95. 5 1/4 x 2 1/4 x 1 1/4 inches.

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You get MFJ's famous one year **No Matter What™** limited warranty. That means we will repair or replace your MFJ **MultiReader™** (at our option) **no matter what** for one full year.

Try it for 30 Days

If you're not completely satisfied, simply return it within 30 days for a prompt and courteous refund (less shipping). Customer must retain dated proof-of-purchase direct from MFJ.

Eliminate power line noise!



MFJ-1026
\$179⁹⁵

New! Completely eliminate power line noise, lightning crashes and interference *before they get into your receiver!* Works on all modes -- SSB, AM, CW, FM, data -- and on all shortwave bands. Plugs between main external antenna and receiver. Built-in active antenna picks up power line noise and cancels undesirable noise from main antenna. Also makes excellent active antenna.

MFJ Antenna Matcher



Matches your antenna to your receiver so you get maximum signal and minimum loss.

Preamp with gain control boosts weak stations 10 times. 20 dB attenuator prevents overload. Select 2 antennas and 2 receivers. 1.6-30 MHz. 9x2x6 in. Use 9-18 VDC or 110 VAC with MFJ-1312, \$14.95.

Dual Tunable Audio Filter



Two separately tunable filters let you peak desired signals and notch out interference at the same time. You can peak, notch, low or high pass signals to eliminate heterodynes and interference. Plugs between radio and speaker or phones. 10x2x6 in.

High-Gain Preselector



High-gain, high-Q receiver preselector covers 1.8-54 MHz. Boost weak signals 10 times with low noise dual gate MOSFET. Reject out-of-band signals and images with high-Q tuned circuits. Push buttons let you select 2 antennas and 2 receivers. Dual coax and phono connectors. Use 9-18 VDC or 110 VAC with MFJ-1312, \$14.95.

CW, RTTY, ASCII Interface



MFJ-1214PC
\$149⁹⁵

Use your computer and radio to receive and display brilliant full color FAX news photos and incredible WeFAX weather maps. Also RTTY, ASCII and Morse code. Frequency manager lists over 900 FAX stations. Auto picture saver.

Includes interface, easy-to-use menu driven software, cables, power supply, manual and **JumpStart™** guide. Requires 286 or better computer with VGA monitor.

High-Q Passive Preselector



High-Q passive LC preselector boosts your favorite stations while rejecting images, intermod and phantom signals. 1.5-30 MHz. Preselector bypass and receiver grounded positions. Tiny 2x3x4 inches.

Super Passive Preselector



New! Improves any receiver! Suppresses strong out-of-band signals that cause intermod, blocking, cross modulation and phantom signals. Unique Hi-Q series tuned circuit adds super sharp front-end selectivity with excellent stopband attenuation and very low passband loss. Air variable capacitor with vernier. 1.6-33 MHz.

Easy-Up Antennas

How to build and put up inexpensive, fully tested wire antennas using readily available parts that'll bring signals in like you've never heard before. Antennas from 100 KHz to 1000 MHz.

MFJ Antenna Switches



MFJ-1704 heavy duty antenna switch lets you select 4 antennas or ground them for static and lightning protection. Unused antennas automatically grounded. Replaceable lightning surge protection. Good to 500 MHz. 60 dB isolation at 30 MHz. MFJ-1702C for 2 antennas.

World Band Radio Kit

Build this regenerative shortwave receiver kit and listen to signals from all over the world with just a 10 foot wire antenna. Has RF stage, vernier reduction drive, smooth regeneration, five bands.

21 Band World Receiver

MFJ's MFJ-8121 new 21 Band World Receiver lets you travel the world from your armchair! Listen to BBC news from London, live music from Paris, soccer matches from Germany and more! Covers 21 bands including FM, Medium Wave, Long Wave and Shortwave. **Sony®** integrated circuit from Japan, multicolored tuning dial, built-in telescopic antenna, permanent silkscreened world time zone, frequency charts on back panel. Carrying handle. Operates on four "AA"s. Super compact size!

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world band tuning tips

your monthly international radio map

This listing is designed to help you hear more shortwave broadcasting stations. The list includes a variety of stations, including international broadcasters beaming programs to North America, others to other parts of the world, as well as local and regional shortwave stations. Many of the transmissions listed here are not in English. Your ability to receive these stations will depend on time of day, time of year, your geographic location, highly variable propagation conditions, and the receiving equipment used.

AA, FF, SS, GG, etc. are abbreviations for languages (Arabic, French, Spanish, German). Times given are in UTC, which is five hours ahead of EST, i.e. 0000 UTC equals 7 p.m. EST, 6 p.m. CST, 4 p.m. PST.

UTC	Freq.	Station/Country	Notes	UTC	Freq.	Station/Country	Notes
0000	3280	La Voz del Napo, Ecuador	SS	0330	11690	Radio Jordan	
0000	6265	ZNBC, Zambia		0330	6185	Radio Educacion, Mexico	SS
0000	12040	Radio Ukraine Int'l		0330	15640	Kol Israel	HH
0000	9385	Radio Ukraine Int'l		0330	4995	AFRTS/AFN, Sicily (Italy)	
0000	13675	UAE Radio, Dubai	AA	0345	9505	Radio Japan/NHK	
0000	17615	BBC relay, Thailand		0400	15560	Radio Netherlands relay, Madagascar	DD
0030	11655	Voice of Turkey		0400	17825	Radio Japan/NHK	JJ
0030	12005	RTT Tunisienne, Tunisia	AA	0400	17630	Africa Number One, Gabon	FF
0030	15570	Vatican Radio		0400	9660	Radio Veritas Asia, Philippines	RR
0030	11625	Vatican Radio		0400	9760	VOA relay, Philippines	
0030	5050	Radio Tanzania	Swahili	0400	11710	Voice of Korea, North Korea	
0030	11905	Radio Taipei Int'l		0400	9325	Voice of Korea, North Korea	RR
0030	9495	Radio Sweden		0400	6793	Galei Zahel, Israel	HH
0100	9885	Swiss Radio Int'l		0400	4800	Radio Lesotho	
0130	7260	Radio Vanuatu, Vanuatu	EE/Pidgin	0400	12065	Radio Netherlands, via Russia	
0130	11845	Voice of Turkey		0400	11920	RTV Marocaine, Morocco	AA
0130	7130	Radio Taipei International, Taiwan		0420	15084	Voice of Islamic Republic of Iran	Farsi
0130	21530	Radio Sweden		0430	9595	NSB - Radio Tampa, Japan	JJ
0200	15385	Radio Exterior de Espana		0430	15170	Broadcasting Service of the Kingdom, Saudi Arabia	AA
0200	15060	Family Radio, USA, via Taiwan	CC	0430	4753	Radio Republik Indonesia, Makassar	II
0200	15250	VOA relay, Sri Lanka		0430	17620	Voice of Russia	RR
0200	12010	Swiss Radio Int'l, via Fr. Guiana		0430	15275	Deutsche Welle, Germany, via Rwanda	GG
0200	12130	Adventist World Radio, via South Africa		0430	15240	VOA relay, Northern Marianas	
0200	7110	RTT Tunisienne, Tunisia	AA	0430	15170	Radio Exterior de Espana	SS
0200	9515	Radio Korea Int'l, S. Korea, via Canada		0445	9465	KFBS, Saipan, No. Marianas	RR
0200	15175	Radio Free Asia, USA, via Sri Lanka	unid.	0500	9445	Adventist World Radio, via Slovakia	
0200	21480	Radio Romania	unid	0500	17660	Radio Rossi, Russia	RR
0230	4890	Radio Chota, Peru	SS	0500	17870	Channel Africa, South Africa	
0230	4950	Radio Madre de Dios, Peru	SS	0500	17535	Kol Israel	HH/EE
0230	4996	Radio Andina, Peru	SS	0500	4775	Trans World Radio, Swaziland	GG
0245	11940	Radio Romania Int'l		0500	11650	KFBS, Saipan, No. Marianas	RR
0300	11720	Radio Pilipinas, Philippines		0500	11635	Radio Norway	NN
0300	6480	Radio Altura, Peru	SS	0500	11685	Radio Telefis Eireann, Ireland, via Singapore	
0300	9675	NBC, Papua New Guinea		0500	9785	Deutsche Welle, via Portugal	
0300	7295	Radio Malaysia Radio 4		0500	9740	BBC relay, Singapore	
0300	7255	Voice of Nigeria		0500	13735	Swiss Radio Int'l, via Singapore	
0300	13625	Radio Free Asia, Tinian, No. Marianas	CC	0500	9525	Voice of Indonesia	II
0300	7195	VOA relay, Morocco		0530	13625	Radio Sweden	
0300	17675	Radio New Zealand Int'l		0530	9405	Far East Broadcasting Co., Philippines	CC
0330	15495	Radio Kuwait	AA	0530	15150	Voice of Islamic Rep. of Iran	
0330	21590	Radio Netherlands via Bonaire		0600	7275	VOA relay, Morocco	

UTC	Freq.	Station/Country	Notes	UTC	Freq.	Station/Country	Notes
0600	12010	Voice of Russia		1230	12095	BBC, via Ascension Is.	
0600	9760	NSB, Radio Tampa, Japan	JJ	1230	15345	RAE, Argentina	SS
0600	21520	RAI Int'l, Italy	II	1230	17580	Radio Australia	
0600	17600	Voice of Islamic Rep. of Iran	unid	1300	4876	Radio La Cruz del Sur, Bolivia	SS
0600	7150	RAI Int'l, Italy		1300	13710	VOA relay, Botswana	FF
0600	12085	Voice of Mongolia		1300	11900	Radio Bulgaria	
0600	9930	KWRH, Hawaii		1300	12019	Voice of Vietnam	
0600	4832	Radio Litoral, Honduras	SS	1330	4760	ELWA, Liberia	
0600	3291	Voice of Guyana		1330	4950	Radio Nacional, Angola	PP
0600	15590	Radio Cairo, Egypt	AA	1400	4765	Radio Congo	FF
0600	3300	Radio Cultural, Guatemala	SS	1400	6065	Christian Voice, Zambia	
06.30	7110	Voice of America relay, Greece		1500	7185	Radio Sonder Grense, South Africa	Afrikaans
0630	13790	Deutsche Welle, Germany		1500	9600	Radio Singapore Int'l	
06.45	4052.5	Radio Verdad, Guatemala	SS	1500	9610	RTV Congolaise, Congo	FF
0700	7265	Sudwestrundfunk, Germany	GG	1500	9930	Radio Free Asia, via KWHR, Hawaii	VV
0700	21580	Radio France Int'l relay, French Guiana		1530	11640	World Beacon, USA, via South Africa	
0700	9805	Radio France Int'l	FF	1600	11705	UAE Radio, Abu Dhabi	AA
0700	12105	Voice of Greece	Greek	1600	11715	Radio Algiers, Algeria	AA
0700	6249	Radio Nacional, Equatorial Guinea	SS	1600	11755	HCJB, Ecuador	
0700	9385	Adventist World Radio, Guam	AA	1600	11787	Radio Iraq Int'l	AA
0700	13660	BBC, England	AA	1600	11830	Vatican Radio	CC
07.30	9730	China Radio Int'l, via French Guiana		1600	11860	Adventist World Radio, Guam	
0730	9820	Radio Havana Cuba		1600	11930	Radio Marti, USA	SS
0730	21455	HCJB, Ecuador		1600	12085	Radio Damascus, Syria	AA
07.45	4919	Radio Quito, Ecuador	SS	1700	15175	Radio New Zealand	
0800	9900	Radio Cairo, Egypt		1700	4885	Radio Clube do Para, Brazil	PP
08.15	11600	Radio Prague, Czech Republic		1700	4915	Ghana Broadcasting Corp., Ghana	
08.35	13650	China Radio Int'l		17.30	4975	Radio del Pacifico, Peru	SS
0900	6020	Radio Australia		1830	4985	Radio Brazil Central	PP
09.30	12050	Radio Cairo	AA	1830	5020	La Voix du Sahel, Niger	FF
0930	11615	Radio Prague, Czech Republic		1900	56035	Radio Aparecida, Brazil	PP
0930	9550	Radio Rebelde, Cuba	SS	1900	5055	Faro del Caribe, Costa Rica	SS
1000	5030	University Network, Costa Rica		19.30	5100	Radio Liberia Int'l	
1000	9760	Radio Canada Int'l		1930	6155	Radio Austria Int'l, via Canada	
10.30	9380	China National Radio (CPBS), China	CC	1930	7285	Radio Polonia, Poland	
1030	11690	Voz Cristiana, Chile	SS	2000	9400	Radio Bulgaria	GG
10.45	9625	CBC Northern Service, Canada		2000	9470	Croatian Radio, via Germany	Croat
1100	6160	CKZU, Vancouver, Canada		2000	9540	Radio Tirana, Albania	
1100	6030	CFVP, Calgary, Canada		2100	9575	Radio Mediterranean Int'l, via Morocco	AA/FF
1100	15565	Radio Vlaanderen Int'l, Belgium, via Bonaire		2100	9620	Radio Ukraine Int'l	Ukrainian
11.30	11980	Radio Canada Int'l		2100	9710	Radio Vilnius, Lithuania	
1130	21550	Voz Cristiana, Chile	SS	21.30	9737	Radio Nacional, Paraguay	SS
1200	11975	VOA relay, Sao Tome		2130	9870	Trans World Radio, Monaco	
1200	9460	Voice of Turkey	TT	2130	9950	All India Radio	
1200	9780	Republic of Yemen Radio	AA	2130	10942	AFRTS/AFN, Italy	
1200	4472	Radio Movima, Bolivia	SS	2200	11570	Radio Pakistan	unid
1200	7125	RTV Guinea	FF	2200	11715	Radio Slovakia Int'l	
1200	21740	Radio Australia		2200	11735	Radio Tanzania-Zanzibar	AA
1200	5990	China Radio Int'l	SS	2200	11785	Radio Guiaba, Brazil	PP
1200	11705	Radio Havana Cuba		2200	11818	Broadcasting Service of the Kingdom, Saudi Arabia	AA
1200	11635	Radio Denmark, via Norway	DD	2200	11820	Radio Polonia, Poland	
1200	7210	Radio Belarus Int'l		2200	11990	Radio Kuwait	AA
1200	9870	Radio Austria Int'l		22.30	15215	Channel Africa, South Africa	
1200	15095	Far East Broadcasting Co., Philippines		2230	15270	Voice of Armenia	
12.30	6458	AFRTS/AFN, Puerto Rico		2230	17775	Radio Tashkent, Uzbekistan	
1230	4915	Radio Anhuanguera, Brazil	PP	2230	15400	Radio Finland	
1230	13660	Radio Vlaanderen Int'l, Belgium, via Bonaire		22.45	15425	Sri Lanka Broadcasting Corp.	
1230	6235	Trans World Radio, via Albania	unid	2300	15435	Radio Jamahiraya, Libya	AA
				23.30	15445	RDP Int'l, Portugal	PP
				2330	17575	RDP Int'l, Portugal	

radios & high-tech gear

review of new, interesting and useful products

AOR Announces "Breakthrough," New TDF-370 Multi-Mode DSP And Digital Terminal

AOR has announced the release of its new TDF-370 Multi-Media Terminal, or MMT, a device that processes transmitted and received audio and can decode, encode, and display PSK31 and RTTY signals. The unit can even simulate "stereo" reception from received signals, including HF SSB and CW audio. "It is a breakthrough in applied audio and digital technology," said Taka Nakayama, KW6I, vice president of AOR USA, Inc. "We believe we have created a very unique product every operator can use and appreciate. The MMT is a huge leap forward."

The AOR MMT performs nine functions — Received voice audio processing, received CW audio processing, PSK31 and RTTY reception and display, PSK31 and RTTY transmission, microphone equalization, digital voice recorder, and SSTV operation (optional software required).

The AOR MMT uses a new Fast Fourier Transform audio filter that creates a more "natural" sound for the listener while dramatically reducing background noise and interference. Line enhanced noise reduction uses new algorithms to attack noise. An auto-notch function is used to reduce or eliminate annoying interference. "We believe Fast Fourier Transform technology sets the AOR MMT apart from other audio processors in the marketplace," said Mr. Nakayama.

Perhaps the most exciting development in the AOR MMT is its ability to derive "stereo" SSB from received signals. "The effect is astonishing," said one tester. "It seems to push the noise out to the left and right, while 'centering' the voice signal." The stereo effect can also be adjusted to individual tastes, dramatically changing how the listener perceives the audio. Stereo earphones are provided with the AOR MMT.

More standard noise reduction and user selected bandpass filtering are also available for the operator to apply to received voice signals. AOR feels this gives the user maximum flexibility in selecting the methods to receive signals under adverse conditions.

Among its many capabilities, the AOR MMT can receive, decode, and display received PSK31 and RTTY signals. The LCD panel on the unit helps the operator "zero beat" the targeted signal and displays text in a "running" format, allowing reception of those signals without a computer or terminal attached. The BPSK and QPSK PSK31 formats are supported and RTTY Baudot is supported in 170, 425, and 850 shifts.

The MMT can also be connected to a computer. Using a simple terminal communications program (and no other software) the operator can transmit and receive PSK31 or RTTY signals. The MMT has a DSUB9/RS-232C connector and comes with a serial cable.

Code operators should appreciate three different modes of processing available for CW reception. Bandpass filtering, Noise Reduction and "Stereo" modes give the operator options useful in copying signals. It is possible for the operator to select different bandpass characteristics for the left and right channels of the earphones.

The AOR MMT can also process outgoing audio, through its

eight-band equalizer that allows the user to contour a microphone to his or her individual voice characteristics or perhaps overcome some of the limitations present in some microphones. Using connectors provided with the AOR MMT, it is possible to sustain normal PTT mic functions through the TDF-370. Adapters are included for use with traditional round eight-pin microphone cables. No modification to station equipment or the existing mic connector is necessary.

The AOR MMT can capture over 100 seconds (total) of audio in up to eight different memories. DPCM compression saves space and delivers good fidelity. The MMT constantly monitors audio streaming through the unit. When the record function is activated, the MMT actually captures up to 6.4 seconds of audio prior to the activation of the DVR. This can help operators capture critical information after it may have been heard!

The MMT can operate for long periods on its internally contained four AA cells or from an external regulated DC power supply of 9–15 volts. This makes it possible for the MMT to be used in field operations, mobile, or base use. It can even be used by backpackers or in conjunction with remote QRP operations.

The MMT supports 9600 bps SSTV at 56.7 kHz. Optional software is required, as is a computer for viewing SSTV images. When connected to a computer, an operator can use a simple terminal program to control the settings and operations of the AOR MMT. Parameter settings can also be changed and retained in the non-volatile EEPROM memory that does not require a battery backup. The provided serial cable supports both 9 and 25 pin computer serial ports. AOR will also make available free TDF-370 control software for download from its website.

The AOR MMT has two selectable inputs, allowing connection to different audio sources. LED indicators show high, medium, and low input levels. A small internal speaker allows the user to locate signals without using headphones. An external speaker port is present but AOR recommends limited use of that function if operating on battery power. A bypass switch allows the operator to compare the effects of signal processing. The LCD display can be illuminated with the touch of a button. An attenuator switch may be used to reduce the level of strong incoming signals. The two-line LCD display shows the operating mode and settings unique to each operation. The MMT is approximately 2.5 inches high, 4.5 wide and 6.2 deep. It weighs just 12.3 ounces.

The AOR MMT is shipped with stereo earphones, computer serial cable, a mono input cable, stereo connectors for operator-wired input/output interface, 8-pin male and female mic connectors and a power cable for connection to a regulated DC power supply.



AOR's new TDF 370 MMT.

"We believe the AOR MMT is a revolutionary development in audio processing for the radio enthusiast, perhaps the first of the new millennium," said Mr. Nakayama. "Those who have sampled the unit say it is a 'must-have' accessory for their stations. We even had offers to buy the test unit!"

The AOR MMT should be available at dealers specializing in radio equipment in June. MSRP for the AOR TDF-370 MMT has not yet been set, but AOR hopes for a 'street price' under \$300. Dealers are able to set their own prices, regardless of MSRP.

For more information contact Takashi Nakayama, vice president, at 310-787-8615. Tell Mr. Nakayama that you read about the new MMT in *Popular Communications*!

Cutting Edge Carries Mobile Multiband Antenna For FT-817

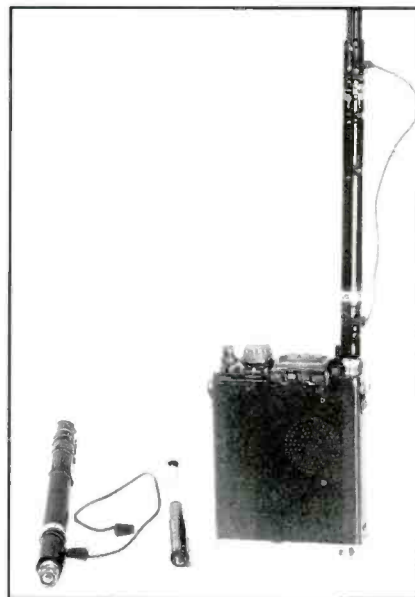
Trying to tune in the world from a mountaintop with your FT-817? England's finest mobile antennas just got a little closer to home. We have found that Cutting Edge Enterprises is now carrying the cream of Waters and Stanton mobile radio antennas designed specially for the Yaesu FT-817. These are ultra light, ultra compact antennas that have surprisingly excellent performance for such a small package.

The entire line is great, but a favorite is the ATX-All Band antenna. Using technology similar to the Outbacker™ the ATX multiband antenna is a design of tapped coils with a wandering lead, but on a miniature scale. The entire coil and tap section is only 12-inches long, but this incredible antenna works in all bands between 6 and 80 meters! Just tap into the band you want and you're ready to go. With a removable telescoping whip sec-

tion, the entire package can fit into the palm of your hand. It's a back-packer's dream.

Cutting Edge also offers a tough nylon pouch for a pittance that carries and protects these antennas. The pouch is designed to fit neatly onto the Worldpouch, which is just hitting the market to carry the FT-817. Just think of it — an entire all-band, all-mode radio station in a fanny pack! Get out of the house, get out of the car, and keep going!

Antenna prices range from \$25 to \$116. Visit the Cutting Edge website at www.powerportstore.com for more details and pricing. For further information or distributor inquiries, contact Cutting Edge Enterprises, 1803 Mission Street, Suite PMB-546, Santa Cruz, CA 95060 or phone 800-206-0115. You can also E-mail them at info@powerportstore.com. Be sure to tell them you read about it in *Pop'Comm*.



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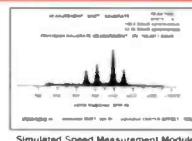
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Internet Auctions Increase The Value Of A QSL

It used to be that broadcast QSL cards were of little or no value to anyone other than for a personal verification of reception. If it weren't for the work of groups like the Committee for the Preservation of Radio Verifications (CPRV) and the National Radio Club (NRC), many historically significant collections would have found their way to the nearest dump. Now the popularity of Internet auctions has suddenly given value to QSLs and other promotional broadcast items. What was once relegated to yard sales and flea markets is now available to millions of potential buyers on the Internet. Postcard collectors are discovering QSL cards and paying big money for cards from the nostalgic days of radio. QSL cards are selling for anywhere from \$5 to \$50 each (or more!). Music collectors are seeking radio station hit lists, especially from the early rock n' roll era. Novelty items with radio station call letters such as wall clocks, microphones, framed advertisements and photos are finding their way on to the auction block.

On-line auctions are a great place to find used communications receivers and antique radios, but it's best to proceed with caution. Learn about a receiver first. Talk to fellow DXers. Check back issues of the *Passport to World Band Radio* and *RDI White Papers* for receiver reviews and possible shortcomings or technical problems. Determine the item's true market value through antique radio classifieds or retailers of used equipment. It's easy to lose control in emotional last minute competitive bidding.

Here are some more tips for safe auction bidding on the Internet. Use a credit card for your protection just in case the seller proves to be dishonest. Many on-line auction sites offer secure credit card payment services for individual sellers and buyers. If you can't pay by credit card, then use a personal check. Be suspicious of sellers that will only deal in money orders or cash. Communicate with the seller via e-mail before placing a bid on an expensive item. Ask for the seller's name and address. Ask for specific details about the condition of the item. If the seller doesn't respond, then don't place a bid. Most sellers are honest and reputable, but there's always the chance you'll find a few bad apples in the bunch.

Internet auctions have opened up a whole new aspect to collecting QSL cards and broadcast paraphernalia. QSL cards are not only desirable for verification of reception but they represent the history of radio broadcasting from a unique perspective. Good luck searching for items from your favorite stations, and be sure to share your successful relic hunting with us at *Pop'Comm*.

QSL Information

560 & 1220 KLZ & KLVZ Denver, Colorado, confirmation letter on Crawford Broadcasting Company stationary for both stations and their format swap on May 21, received in two days for an E-mail report, signed W.C. "Cris" Alexander, Director of Engineering. Address: 2150 W 29th Ave, Suite 450, Denver, CO 80211. Letter says the swap officially occurred at

HERE!

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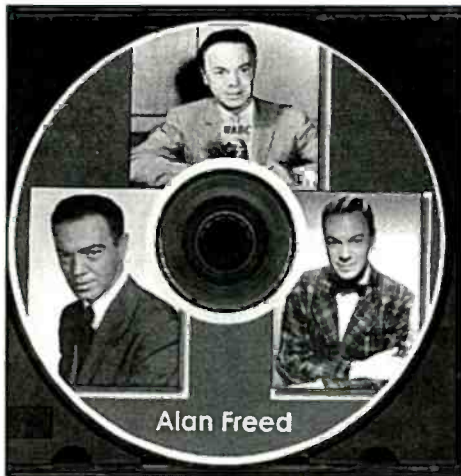
This Philco radio advertisement was up for auction at VintagePostcards.com.

Sterling silver KFNF souvenir spoon found on eBay. Thanks to Andy Wallace.

0450 Mountain time which was the time of my report, and that KCMN 1530 will simulcast some of the programming from KLVZ between 1000 and 1800 MT. (Griffith, CO)

1610 KALT Atlanta, Texas, E-mail QSL in five days after several follow-ups via regular mail, signed Walter Lancaster-Op Director KALT & Dominion Media Corp. E-mail address dmctxk01@txk.net. This is the first QSL I have heard of from KALT. (Martin, OR)

1630 XEUT Tijuana, Mexico, a very nice 8-1/2 x 11 Certificado de Sintonía on heavy parchment paper, QSL letter with two official rubber stamp seals, program schedule, poster,



This 1955 Alan Freed Radio Broadcasting CD is available for bid on the Amazon.com auction site.

89.3	WSKG	Binghamton	Public Radio
91.5	WSQX	Binghamton	Public Radio, jazz
91.7	WSKG	Binghamton	Simulcast of 89.3
92.5	WKGB	Binghamton	Rock
93.9	WCHN-FM	Norwich	MOR
95.1	WKAT	Oneonta	Country
97.1	WLIT	Syracuse	Light rock
97.5	WPEL	Sayre, PA	Religion
98.1	WHWK	Binghamton	Country
99.1	WAAL	Binghamton	Classic Rock
100.9	WCDO	Sidney	Simulcast of 1490
101.9	WJIV	Cherry Valley	Religion
103.1	WZOZ	Oneonta	Classic Rock
105.1	WOIV	Ilion	Religion
105.7	WSTR	Binghamton	Alternative

Radio Disney Rocks!

and two bumper stickers (all in Spanish) in 125 days for Spanish report with tape recording plus \$1 and one English follow-up, signed Martha Adriana Marquez, Jefa de Radio Universidad. Address: Universidad Autónoma de Baja California (UABC) Radio, 233 Paulin Ave., P.O. Box MSC 5163, Calexico, CA 92231-2646. (Griffith, CO)

1660 WMIB Marco Island, Florida, computer-printed QSL card in 246 days, signed Phil Beckman, former Operations Manager. Address: 601 Elkcam Circle, Marco Island, FL 33937. Phil wrote on the back of the QSL that even though he no longer works for WMIB he thought he should still send out confirmations from the reports he had received! He now works at WJGO in Fort Myers. (Griffith, CO)


In response to mention of Disney adding more low power AM stations to their kids radio network (*Pop'Comm*, Broadcast Technology, July 2001), former broadcast engineer Bob Souza, W3KHJ writes, "Radio Disney may be adding some more affiliates, but they are not all low power. KDIS 710 in Los Angeles is 50,000 watts. So is Disney's station in New York City (WQEW 1560) and Phoenix, Arizona (KMIK 1580). Last time I checked, that is the maximum wattage an AM can operate within the USA. Here in Fresno, California, and elsewhere across the country, affiliates operate in the x-band with 10,000 watts. Tune them in. What a pleasure it is to listen to a contemporary music network without all the filth. Long live Radio Disney!" To find out where

Bandscan

Mark Connelly, WA1ION, has started a bandscan web page devoted to listings of typical mediumwave reception submitted by DXers from across North America and around the world. Mark defines a bandscan as "a thorough analysis of all receivable signals in a given frequency range, including everything from easily heard locals to weak distant stations." Visit "Mark's Radio, Electronics, Music, and other Web Links" at <http://members.aol.com/MarkWA1ION/weblink.htm> and click on Bandscan World. While you're there, check out some of the other interesting radio-related links.

Rich Klingman sent in this bandscan of AM and FM radio stations in the central New York area.

540	WSYR	Syracuse	
620	WHEN	Syracuse	ESPN Sports Radio
680	WINR	Binghamton	Music of Your Life
730	WDOS	Oneonta	Country
810	WGY	Schenectady	News, talk
870	WHCU	Ithaca	Talk, light music
920	WRGB	Cortland	Oldies
970	WCHN	Norwich	Music of Your Life
1270	WDLA	Walton	Country
1290	WNBF	Binghamton	News, talk
1360	WRSG	Binghamton	Oldies
1430	WENE	Elmira	News, talk
1490	WCDO	Sidney	MOR
88.5	WPEI	Spencer-VanEtten	Religious



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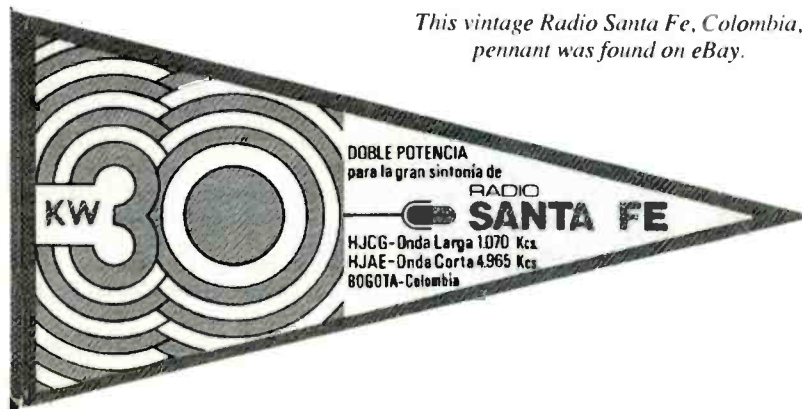
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Pending							
New Call	Location	Freq.	Old Call				
WFNS	Blackshear, GA	1350	WXRБ	KBVI	Rexburg, ID	100.5	KRIC
WFSK-FM	Clarksville, VA	98.3	WJLC	WSQR-FM	Genoa, IL	106.3	WOXM
				WMOS	Lexington, IL	99.5	New
				WVSI	Mount Vernon, IL	88.9	New
				WYXY	Boonville, IN	107.1	WBNL-FM
				WGSN	Ligonier, IN	102.7	WLNB
				WEKM	Middlesboro, KY	90.1	New
				KNXX	Donaldsonville, LA	104.9	KKAY-FM
				KFFW	Cabool, MO	89.9	KVBD
				WBUB-FM	Moss Point, MS	104.9	WDWG
				KMCJ	Colstrip, MT	99.5	KBPY
				WBAZ	Bridgehampton, NY	102.5	WBSQ
				WCOS	Montauk, NY	104.7	WBAZ
				WBEA	Southold, NY	101.7	WCOS
				WXST	Delaware, OH	107.9	WJHT
				KLIS	Coalgate, OK	105.5	KNOR
				KNOR	Pauls Valley, OK	97.7	KGOK-FM
				KMJZ-FM	Prineville, OR	95.1	KRCO-FM
				WBZH	Freeland, PA	103.1	WWFH
				WWZB	Huntingdon, PA	106.3	WQHG
				WUBZ	Pittston, PA	102.3	WSHG
				WUZY	Somerset, PA	97.7	WSGY
				WJZX	Port Royal, SC	99.7	WHBZ
				WZYZ	Spencer, TN	90.1	New
				KOYE	Frankston, TX	96.7	KLIS
				KXBN	Cedar City, UT	94.9	KBRE-FM
				KMGR	Delta, UT	95.7	KZEZ
				KRFD	Richfield, UT	97.5	KACE
				WBWR	Bedford, VA	106.9	WLQE-FM
				WDRK	Cornell, WI	99.9	New
				KCGL	Powell, WY	104.1	KRYV

Changes							
New Call	Location	Freq.	Old Call				
KLFF	Arroyo Grande, CA	890	New				
KZTK	Bakersfield, CA	1100	KZPM				
KFSD	Escondido, CA	1450	KSPA				
KCAA	Loma Linda, CA	1050	KBBV				
KWDJ	Ridgecrest, CA	1360	KZIQ				
WNEZ	Manchester, CT	1230	WLAT				
WLAT	New Britain, CT	910	WNEZ				
WEBS	Calhoun, GA	1110	WKEP				
WPJX	Zion, IL	1500	WDDZ				
WXXA	Louisville, KY	790	WWKY				
WVOT	Wilson, NC	1420	WALQ				
WSKN	San Juan, PR	1320	WUNO				
WUNO	San Juan, PR	630	WSKN				
WDDZ	Pawtucket, RI	550	WICE				
KNNZ	Cedar City, UT	940	KBRE				
KKFS	Dunnigan, CA	105.5	KLNA				
KFSD-FM	Escondido, CA	92.1	KFSD				
KXOL-FM	Los Angeles, CA	96.3	KFSG				
KFSB	Ontario, CA	93.5	KNJR				
KFSG	Redondo Beach, CA	93.5	KMJR				
KVLE-FM	Gunnison, CO	102.3	KVLE				
WSSG	Norfolk, CT	89.3	New				



This vintage Radio Santa Fe, Colombia, pennant was found on eBay.

to tune in or listen via Real Player, visit the official home page at <http://disney.go.com/radiodisney/> and enjoy!

Broadcast Loggings

From Dean Manley, KH6B, "While traveling the California I found a station WPMD Cerritos College, Norwalk apparently broadcasting only college community announcements and frequent station IDs. It was on 1700 kHz. I listened through Norwalk and received it on a car radio out to about four miles, then lost it in power-line noise. I found some data about the station on the FCC's ULS Database: WPMD956, Cerritos Community College, 11110 Alondra Blvd, Norwalk, CA 90650, power 10 watts, antenna height to tip 14 meters."

These Highway Advisory Radio/Traveler Information Stations (HAR/TIS) are always fun to chase. Many will cover hundreds of miles on nighttime skip. Most can be found either at 530 kHz or in the expanded band, typically operating with 10 watts, sometimes as much as 50 to 60 watts. I've listed a couple more in this month's selected logs. All times are UTC.

670 KDLG Dillingham, Alaska. at 0925 heard mixing and on top of KBOI with old rock, "Candles in the Rain" by Melanie and "Take the Long Way Home" by Super Tramp, unneeded but never heard in summer. (Martin, OR)

680 KWKA Clovis, New Mexico, at 0453 faded in just long enough to hear promo "... mornings right here on KWKA ..." then back into the noise, lots of adjacent channel interference from local on 670. (Griffith, CO)

690 KGGF Coffeyville, Kansas, at 0458 a detailed but very rapid delivery sign-off announcement, I was hoping to ID a weak signal underneath after the KGGF sign-off but the open carrier remained on until at least 0520 when I quit checking. (Griffith, CO)

690 Caribbean Beacon, The Valley, Anguilla, at 0040 parallel 6090 kHz with preaching about historical events involving the queen of Spain. (Connelly, MA)

920 KSRM Soldotna, Alaska, at 0857 briefly with a promo and call letter ID, first time heard in a couple of years, soon lost to CKCQ. (Martin, OR)

930 KTKN Ketchikan, Alaska, at 0909 good with oldies pop tunes and KTKN ID. (Martin, OR)

1150 KKNW Seattle, Washington, for the 6th time (at least) has changed format, now KKNW "News Channel 1150," CNN News and some talk 24 hours a day. (Martin, OR)

1206 France Bleu, Bordeaux, France, at 0341 a good signal parallel 1557 kHz with cover version of Ray Charles 1961 hit "Unchain My Heart." (Connelly, MA)

1375 RFO St. Pierre et Miquelon at 0345 a man and woman in French; very strong on new "Kaz" squashed delta antenna, at least 10 dB better than adjacent signals on 1370 and 1380 kHz. (Connelly, MA)

1560 WQEW New York, New York, at 0815 good with Radio Disney topping KNZR. ID as "Radio Disney 1560 New York." (Martin, OR)

1600 KATZ St. Louis, Missouri, at 0945 good with Black gospel program and KATZ ID. (Martin, OR)

1640 HAR New York, New York, at 0225 poor with mentions of the New York Department of Transportation and I-95. (Conti, NH)

1640 Pomona, New York, at 0230 fair with a woman announcing office hours and "You are tuned to Rockland County's residents' information station, 1640 AM. We aim to keep Rockland County residents informed." (Conti, NH)

1700 WAFN Miami Springs, Florida, at 0245 fair with religion in Spanish on the Voz Cristiana network. (Conti, NH)

1700 TIS New York, New York, at 0235 fair with a run-down of road construction, "Thank you for choosing John F. Kennedy International Airport." (Conti, NH)

Thanks to Mark Connelly, Patrick Griffith, Rich Klingman, Dean Manley, Patrick Martin, Bob Souza, and Andy Wallace. 73 and good DX! ■



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Launch Weather And Restricted Airspace

Standing 126 feet tall, a Boeing Delta II rocket is delayed for lift-off from the Eastern Range, Fla., due to bad weather. At the same time an 18 story Lockheed Martin Titan IV rocket is also holding at the Western Range, Calif., for restricted airspace to be cleared. Weather conditions and clear airspace play an important role in any space launch. Let's look into how these two elements are monitored and how you can listen to the action.

Eastern Range: Airborne Weather Surveillance

The Eastern Range (ER) is a national range managed by the Air Force for the Department of Defense (DOD) that supports ballistic/space launch programs and aircraft testing. Launches are conducted in the general area of Cape Canaveral, Fla. The primary weather concern during these operations is natural and triggered lightning. The seasonal differences in thunderstorm occurrence (natural lightning) varies greatly between summer and winter months. However, triggered lightning (lightning caused by the launch vehicle itself) remains a concern year round. Weather launch commit criteria (LCC) have been established to reduce the risk of harm to launch vehicles from natural or triggered lightning. During approximately half the launch attempts, real-time information on weather conditions within the launch flight path are required and can best be assessed by a knowledgeable and detail-oriented airborne weather observer.

The 45th Space Wing at Patrick Air Force Base, Fla., is responsible for providing real-time airborne day and night-time weather surveillance of the airspace in the vicinity and at Cape Canaveral Air Force Station (CCAFS), Florida, during scheduled launch operations.

Contractor aircraft provide real-time observation and reporting of weather phenomena and parameters as directed by the Launch Weather Officer (LWO) at Range Weather Operations (RWO). One contractor providing this service to the 45 SW is Radian International LLC, Radian Electronics Division based in Austin, Tex. Detailed and accurate information is required to ensure launch operations are conducted safely when marginal weather conditions occur during launch countdowns.

The weather aircraft plays a crucial role in assisting the LWO in evaluating meteorological phenomena associated with well-defined weather LCCs. The following LCCs pertain to all CCAFS launch operations, and vehicles may not launch if any of the following conditions exist:

1.) If lightning is within 10 nautical miles (NM) of launch site/planned flight path within 30 minutes prior to launch unless conditions causing lightning have more > 10NM away from the launch site/planned flight path.

2. Through cumulus clouds with tops higher than +5 degrees C level.

3. Through or within 5 NM of cumulus clouds with tops higher than the -10 degrees C level.

4. Through or within 10NM of cumulus clouds with tops higher than the -20 degrees C level.

5. Through or within 10 NM of the nearest edge of any cumulonimbus or thunderstorm cloud including its anvil.

6. Through any vertically continuous cloud layer depth of 4,500 ft or more with any part located between 0 degrees C and -20 degrees C levels.

7. Through any clouds that extend at or above the freezing level and are associated with disturbed weather (moderate or greater precipitation).

8. Through thunderstorm debris clouds or within 5 NM of thunderstorm debris cloud not monitored by field mills or producing radar returns greater than or equal to 10 dbz.

The aircraft, most of the time a Learjet or Cessna Citation, operate up to an altitude of 45,000 feet (service ceiling), measure and monitor outside air temperatures and winds, and fly through icing and moderate turbulence. The aircraft is equipped with weather radar, and three (two and a backup) radios capable of transmitting pilot reports to the RWO and monitor the airspace controlling agency simultaneously. The aircraft must arrive on station (airborne) with a minimum three-hour loiter capability.

Approximately 10 days before a scheduled launch, the 45th Range Squadron (45 RANS) provides the weather aircraft with date of launch, lift-off time (T-time), launch window (period of time during which the launch can occur — varies from minutes to hours), and launch pad number and coordinates.

Approximately one day before launch, 45 RANS will notify the weather aircraft whether or not ground-based laser operations are planned in conjunction with the launch. If laser operations are planned, 45 RANS will also provide information depicting locations and times prohibiting aircraft operations. In return, the weather aircraft support crew provides the type of aircraft, aircraft tail number, supportable hours on station, and the pilot's name.



The weather aircraft crew will then file a flight plan with a Flight Service Station (FSS). Possibly through FSS-St. Petersburg. (122.3 MHz). The aircraft will stage from an airport within 30 minutes flight time of CCAFS. The flight crew and aircraft are placed on standby no later than launch minus three (L-3) hours and are able to be airborne within 15 minutes of an LWO call-up. After the aircraft is on standby, and no later than L-2 1/2 hours, the pilot will call the LWO via telephone and receive a mission objectives briefing, to include the area of interest. The LWO will make a determination of the need for a weather aircraft, and call prior to launch to tell them to take-off. The aircraft must arrive at the specified time at the area of interest as directed by the LWO. When called into action by the LWO, and before the aircraft initially flies onto the Range, the pilot will contact the Aeronautical Control Officer (ACO call sign: "Cape Leader-1") on radio frequency 125.9 VHF (backup of 133.8 VHF). The ACO will obtain and pass approval of entry into restricted airspace to the pilot. The aircraft will then proceed to the area of interest, as directed by the LWO, to perform the airborne weather surveillance mission. The types of information required of the pilot include, but are not limited to: Cloud height, thickness, and location, temperature, wind, turbulence, status of precipitation, and lightning observations. High performance low light vision equipment (night vision capability) is required to make visual observations of cloud conditions at night.

When the LWO no longer requires airborne weather surveillance, the LWO will direct the aircraft to clear the launch danger area immediately. The ACO will provide the terminal count to the pilot while aircraft is holding clear of the launch danger area. The aircraft holds until otherwise directed. Should an extended hold in the countdown be encountered, the LWO may require additional weather surveillance of the launch corridor. Once there has been a nominal launch, the ACO, with approval from the LWO, will release the aircraft to return home.

Depending upon weather conditions, the weather aircraft may not be called upon at all while standing by. According to 45 SW Airborne Weather Surveillance documents obtained by *Popular Communications*, information pertaining to any aspect of pre-launch, launch, and post launch operations will only be discussed with those persons who have a need-to-know. Strangers, neighbors,

friends, and relatives are not in this need-to-know category. In addition, the 45 SW documents indicate the following wage rates for the crew aboard the weather surveillance aircraft:

- Aerial Photographer \$10.19 per hour
- First Officer (Co-Pilot) \$18.99 per hour
- First Pilot (Captain) \$23.01 to \$20.05 per hour

The total estimated cost of the 45 SW airborne weather surveillance contract is around \$535,502.00.

Restricted Area/Danger Zone Entry; Western Range

The restricted areas and Danger Zone 4 over Vandenberg Air Force Base, Calif., were established by the Department of Defense directives as security measures to "prevent the close-in observation of missile activities." according to documents obtained from the 30th Space Wing. But, recognizing that some re-

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A helicopter from the 76th Helicopter Flight Unit, Vandenberg AFB.

questers have legitimate reasons for entering the area, 30 SW developed a policy to enter these areas.

All requests to enter restricted airspace over Vandenberg are submitted through the 30th Range Squadron Airspace and Offshore Management Section (30 RANS/DOUN, Bldg. 7000 816 13th Street, Suite C Vandenberg AFB, CA 93437-5233.

The 30th Space Wing Operations Security Office (30 SW/XPOO) will review photographs taken by aircraft that are given permission to overfly the restricted airspace. Individuals

must agree to surrender negatives and prints of any photography determined by the government to contain classified or sensitive information.

There are several airspace restricted areas and offshore danger zones associated with Vandenberg AFB. Restricted Area 2517 is not opened to outside agencies (exclusive 30 SW use) unless specific written entry permission is given by the Commander, 30 SW. This also applies to the stopping or loitering of vessels within Danger Zone 4. There are nine Danger Zones extending from Point Sal to Point Conception which are selectively closed at frequent and irregular intervals for hazardous range operations.

In emergency cases involving immediate threat to life, limb or safety of flight, authorizations for immediate passage through restricted areas may be granted by Vandenberg Control Tower, FRONTIER CONTROL (voice callsign for the Western Range Area Control Center), or Los Angeles Air Route Traffic Control Center (ARTCC).

Requests to enter the area must be submitted at least 10 working days before the requested entry. Zone closure information is broadcast by the Air Force's 30 SW on standard marine frequencies at 0900 and 1200 local time, daily except Saturday, Sunday, and holidays. VHF channel 6 (156.3 MHz) and 16 (156.8 MHz).

Aircraft contact FRONTIER CONTROL on VHF 121.4 MHz or UHF 296.5 MHz prior to entering and departing the restricted areas.

See you right here again next month. Remember, your questions, comments, and photos are always welcome. Contact me via E-mail at kstein@spacecluster.com or postal mail at *Popular Communications*, 25 Newbridge Rd., Hicksville, NY 11801. ■

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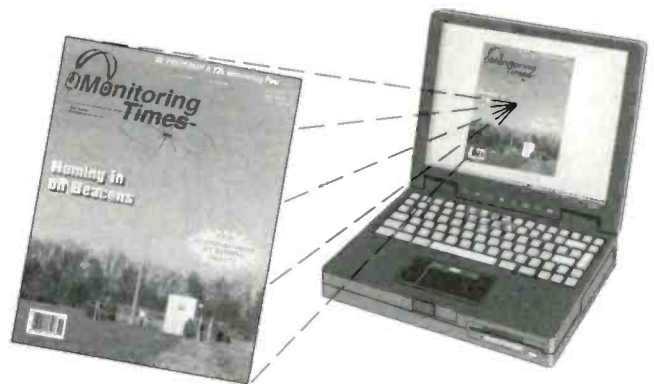
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New Cambodian Clandestine On The Air

A new anti-Cambodian clandestine broadcaster began regular weekly broadcasts at the beginning of June. The **Voice of Khmer Krom Radio** was airing programming on **15725** on Fridays between 1400 and 1500. The broadcasts are on behalf of the Khmer Kampuchea Krom Federation.

Another new one — this one directed to Iran — is **Radio Payame Doost** (Radio Message From a Friend). This station is actually a religious broadcaster, operated by a Baha'i faith group based in Washington, D.C., and seeks to combat what they say is misinformation being spread about the Baha'i faith. That implies that the Tehran government is behind the spreading of such "misinformation" and the Baha'is feel a need to render this ineffective. The broadcasts are in Farsi and air on **7480** from 1800 to 1830.

The transmitter is believed to be somewhere in Russia or Eastern Europe. At that hour it isn't likely we'll be able to hear the broadcast in North America.

The **Voice of Democratic Eritrea**, broadcasts on **15670** until 1759, via Julich, Germany. Richard D'Angelo in Pennsylvania noted this one from 1728 tune in, with mostly talks and some short music segments. A possible ID and sign off announcements at 1757.

Another clandestine aimed at the Ethiopian area is **Radio Fana**, which Robert Montgomery logged from his Pennsylvania shack on **6940** from 0237 with IDs at 0328 and 0329.

A new, as yet unidentified program, being beamed to the Ethiopian area is on the air using **12110** from 1700 to 1800. This appears to be on more often than once per week, but not daily. It's apparently the work of something called Netsanet Le-Ethiopia. Reception of this one has been good in the central part of North America.

One of many broadcasters using the "Voice of Hope" slogan is aimed toward the nasty folks running the government of the Sudan. This one, coming from the Dutch transmitters in Madagascar, airs on Saturdays only (UTC date) to sign-off with an English ID at 0427. It's operated by the New Sudan Council of Churches.

Logs are appearing again on the ever-fascinating **New Star Broadcasting Station**. It's being noted on **8300** and **13750** from just past 1100. Also from 1200 on 13750. The content, as always,



Go back far enough and San Salvador's Radio Doble Fís (102.1 FM) ancestry can be traced back to the FMLN's Radio Farabundo Martí, which was active during the guerrilla insurgency some 20 years ago. (Thanks to Fabian Serve, France)

consists of a Chinese song after sign-on, followed by a woman reading numbers in Chinese.

Still another station which hasn't previously been mentioned in this column is the fairly recently arrived **Voice of Mesopotamia**, broadcasting in Kurdish on **15770** and scheduled from 0800 to 1000 and 1400-1600. That schedule, however, is sporadic, at best.

Radio Forward, in Kurdish and Arabic, beamed to Iraq, but supposedly aired from transmitters in Bulgaria, is scheduled on **9960** from 1500.

By now, you'll probably have heard of — and heard — **United Patriot Radio**, which began as Kentucky State Militia Radio. Operator Steve Anderson spends much of his program time railing against the federal government, which technically makes this a clandestine station. The station is heard with good signals on **3260**, upper sideband. During local daylight, check **12182** USB. UPR says it will not QSL reception reports.

That covers things for this round. Remember, your observations about clandestine broadcasters are always wanted and appreciated. That includes reception loggings, of course, but also schedules, addresses, information about transmitter sites being used, the organizations who back these broadcasters, copies of any QSLs you received and whatever else you'd care to toss in the package. Thanks for your continued interest and support. Until next time, good hunting! ■

global information guide

listening to what your world says every day

by Gerry L. Dexter

BBC: Call Them Very Mixed Up

You're wrong. "BBC" no longer stands for what you think it does. It's now an abbreviation for "British Bumpkin Corporation," after the recent announcement of the closure of their North American service on shortwave. Some sort of bizarre bureaucratic thought process, well beyond the grasp of mere citizens, must have brought about this extraordinary and wholly unexpected development.

Why did they do this, you ask? Well, perhaps you didn't know it but it seems you have, practically in your own backyard, an FM station to which you can turn for BBC programming virtually anytime it strikes your fancy. We checked around and, sure enough, there are indeed a couple such stations in our area which air an hour or two of BBC programming per day. The trouble is most of these are the non-commercial, so-called "educational" stations which occupy the bottom portion of the FM band. Unfortunately, our own governmental guardians of the airwaves, the FCC, has allowed so many "community" stations to operate in this range that this part of the FM band is a mess. You have to be within prime range of the FM station's signal in order to avail yourself of the BBC offerings. A lot of us aren't.

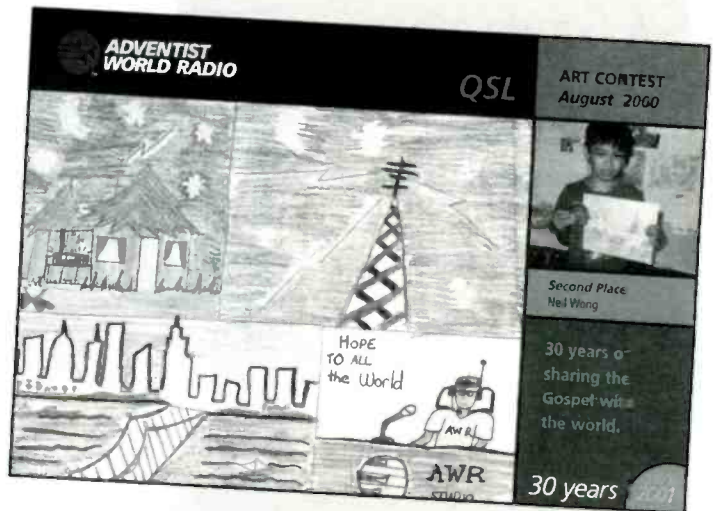
But, no problemo! Just fire up your computer, log on and, voila! There's the Beeb, comin' at you over the Web. What? You're hooked up to an ordinary ISP? No DSL connection? Just a 56k modem? Well, you won't mind sitting there while the download process goes through its buffering bit every few minutes. What are a few digital hiccups amongst friends?

Or, you can just get it off your satellite dish. Surely you have a satellite dish! No?

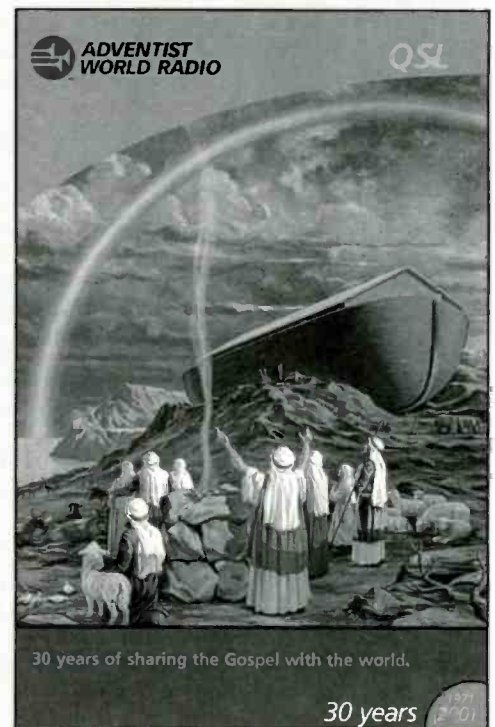
Just that little Grundig portable, eh? Boy, are you ever behind the times! You had better get with it, fella! Get yourself properly hooked up, connected, turned on and tuned in to this modern world. On the other hand maybe, just maybe, the BBC, great as it is, really isn't worth the time, trouble, and expense? Maybe 5975 via Antigua for the entire evening is the answer after all (and always has been). That's our view, if you care to know. So perhaps we'll just forget the BBC for a couple of years. Surely by then you'll be able to pick them up on that little key chain remote thingies you use to unlock your car when you come out of the barbershop.

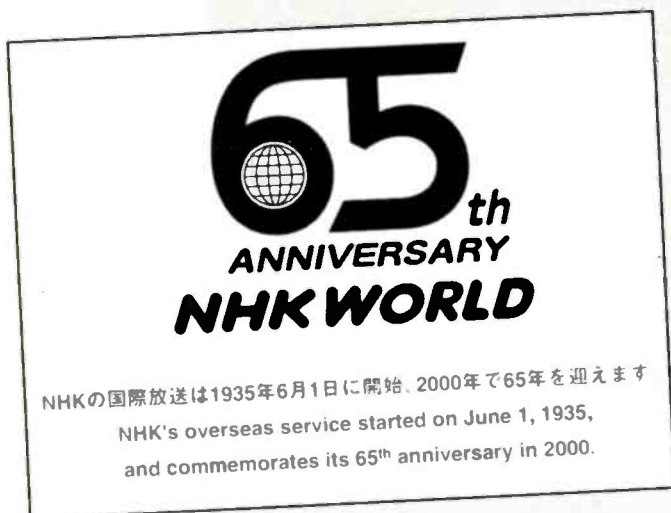
In their announcement, the BBC took pains to point out that the closure of the North American service should not be read as a "retreat from shortwave broadcasting," pointing out the modernization projects underway at their relays in Oman, Cyprus, and Singapore. Feel free to grab your handheld "spin" detector, pass the sensor over the above lines and see if the needle deflects.

The British government is circulating a questionnaire to its official offices overseas (embassies and such) wanting to know about the effects the BBC's decision will have or is having on BBC listeners in the areas losing service (which also includes Australia/New Zealand). This seems an invitation to hear your opinion and we'd strongly suggest you render it. We'd suggest sending your letter to the British embassy, or nearest consulate, probably to the attention of the Press and Public Affairs Office



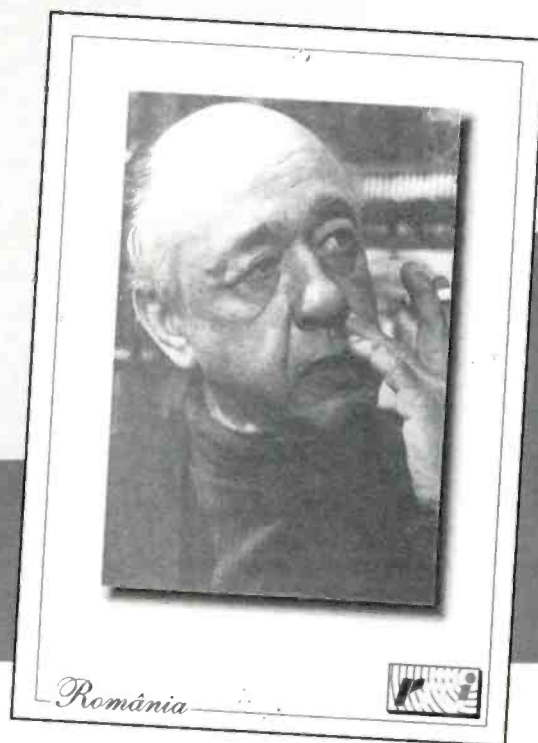
Two of the dozen new Adventist World Radio QSLs that will be released during the next three years.





Radio Japan/NHK is celebrating 65 years on the air with this special card. (Thanks to David Weronka, NC)

Radio Romania International issued this QSL showing Romanian writer Eugene Ionesco.



The embassy address is: 3100 Massachusetts Avenue, Washington, D.C. 20008. And don't hold back!

Yugoslavia Back On Shortwave!

Now, to a happier subject. After nearly a year's silence, Radio Yugoslavia has returned to shortwave. The station earlier had lost access to its Bijeljina transmitter site when the site ended up part of Bosnia-Herzegovina after the Balkan Wars. The English service to East and West North America is in operation again from 0000-0030 and 0430 to 0500 respectively, on **11870**. There are no broadcasts on Sundays. English to Europe is on **6100** from 1830-1900 and 2100-2130 and 2200-2230 on **7230**, except on Saturdays.

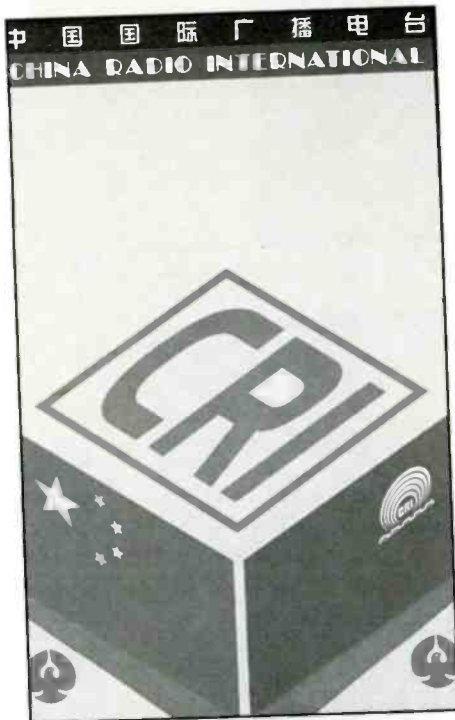
An old-time Angolan religious broadcaster, **Radio Ecclesia**, seems also to have returned to shortwave. An eon or two back, this station was one of the toughest targets that country had to offer,

and just as difficult to coax a QSL out of. In their new robes, however, they've gone the rental route and are being aired by the German DTK transmitters at Julich. The schedule is 0500-0555 on **15545** and **13810** Sunday to Friday from 1800-1859, Saturdays on that frequency from 1800-2130. Also scheduled for future use are **17655**, **15230**, and **17660**. Programming is in Portuguese.

Scandinavian Weekend Radio is continuing its monthly broadcasts with future appearances scheduled for August 4, September 1, October 6, November 3, December 1, and December 25. These broadcasts begin at 2100 the day before the dates given above and run around the clock, ending 24 hours later. The schedule is not exactly in stone but will probably follow this time/frequency schedule: 2100-2300 on **11690**; 2300-0500 on **11720**; 0500-1100 on **11690**, 1100-1500 on **11720**, 1500-1900 on **11690** and 1900-2100 on **11720**.

If a vote is ever taken to determine the shortwave station friendliest to its lis-

teners, the winner is virtually preordained: Adventist World Radio. AWR would have its DX Editor, Dr. Adrian Peterson, to thank for this mythical award. Dr. Peterson has announced the release of a whopping 24 new QSL card designs, to be issued progressively every three months for the next three years. Each one will be available until the stock is depleted. One series features cards showing QSL stamps (released at the start of this year); the other marks the centenary of Marconi's first Trans-Atlantic communication and will come out near the end of the year. Another series honors the artwork of young children who were asked to draw a picture representing Adventist World Radio. The third series pictures the seven stages in the "Drama of the Ages" throughout history. Each of the 12 different designs is available with printed QSL text on the back or with the reverse side blank and a QSL sticker attached. The general address for reports is: Adventist World Radio, 39 Brendon St., London W1H



Here's something to hang on your bulletin board, courtesy of China Radio International.

5HD. England. For continental European languages: Adventist World Radio, Casella Postale 383, 47100 Forlì, Italy. For reports on AWR's Wavescan program: Adventist World Radio, Box 29235, Indianapolis, IN 46229.

This month's book winner is **Pete Becker in Washington State**, who comes through with a nice list of logs each month. Pete receives a copy of Joe Carr's *Receiving Antenna Handbook*, courtesy of the great folks at **Universal Radio** who are concerned that maybe you don't yet have a copy of their mammoth catalog for radio communications hobbyists. If they're right, and you don't, please give them a call at 614-866-4267 and ask for a copy, or E-mail them at dx@universal-radio.com or drop them a line at 6830 Americana Parkway, Reynoldsburg, OH 43068. They'll be greatly relieved to hear from you!

Remember, your shortwave broadcast logs are always sought and forever welcome. Just remember to list your catches by country, double or triple space between them and add your last name and state abbreviation after each. We're also looking for spare QSL cards we can use

as illustrations. Also station schedules, photos — anything and everything you'd care to lay on us! Thanks for your continued interest and support!

Here are this month's logs. All times are in UTC, which is five hours ahead of EST, i.e. 0000 UTC equals 7 p.m. EST, 6 p.m. CST, 5 p.m. MST, and 4 p.m. PST. Double capital letters are language abbreviations (FF = French, AA = Arabic, SS = Spanish, etc.). If no language abbreviation is included the broadcast is assumed to have been in English.

ALBANIA — TWR relay, tentative, **6235** at 0431. Tune in to religious programming with talk in unid. language. Off with TWR interval signal. (Alexander, PA)

ANGUILLA — Caribbean Beacon, **6090** at 0725 with Gene Scott. (Newbury, NE)

ARGENTINA — RAE, **15345** in SS at 0034. Man and woman with vibrant comments before an audience. (MacKenzie, CA)

ASCENSION ISLAND — BBC relay, **12095** at 0320 with news and comment. (MacKenzie, CA)

AUSTRALIA — Radio Australia, **6020** with ABC programming at 1230. (Northrup, MO) **15240** with news, interviews at 0405. // **15415** and **15515**. (MacKenzie, CA) 0728. Also **15515** at 0624 with Sports Focus. (Newbury, NE) **17580** with interview on race-car driving at 0330. (Brossell, WI) **17795** at 2230 with news and interviews. (MacKenzie, CA) **21740** at 2339 with talk program. Barely audible. (Jeffery, NY)

AUSTRIA — Radio Austria Int'l, **9870** heard at 0130 with talk on nuclear fuel. (Weronka, NC) 0150 with "Report From Austria." (Limbach, PA)

BELARUS — Radio Belarus Int'l, **7210**

with news about artists heard at 0210. (Weronka, NC)

BELGIUM — Radio Vlaanderen Int'l, **9925** in DD at 0637. (Becker, WA) **13660**, via Bonaire, at 2228 with local news and current affairs. (Limbach, PA) **15565** via Bonaire with program on tourism in Belgium at 0415. (Brossell, WI) **0423** with weird rock. (MacKenzie, CA) **2235** with talk on trafficking in "conflict diamonds from warring countries." (Newbury, NE)

BOLIVIA — La Cruz del Sur, **4876.6** at 0930 with SS ballads, announcements. ID. (Alexander, PA)

BOTSWANA — VOA relay, **13710** heard at 0535 in FF. (Barton, AZ)

BRAZIL — Radio Anhanguera, **4915** heard at 0206 with string of ads in PP, ID, features including a telephone interview. (D'Angelo, PA)

BULGARIA — Radio Bulgaria, **11900** at 1935 with feature on filmmakers in Bulgaria. (Newbury, NE)

CANADA — CKZN, **6160** at 0750 with CBC programming: Bach, news on the hour with mention of St. John's (Newfoundland). (Newbury, NE) CKZN, Vancouver, **6160** with relay of CBC at 0707. (Becker, WA) CBC Northern Service, **9625** at 0450 with classical music. (Newbury, NE) Radio Canada Int'l, **9760** at 0520 with "Maple Leaf Mailbag" on a Sunday. (Limbach, PA) **15190** at 1225 with news, sports, ID. (Northrup, MO) **15305** with "Vinyl Café" at 1435. (Newbury, NE)

CHILE — Voz Cristiana, **11690** in SS at 1111 and 1213 with Christian rock. (Newbury, NE) **21500** with ID by woman at 1215. (Northrup, MO) **21550** with religious programming in SS at 2013. (Jeffery, NY)

CHINA — China Radio Int'l, **5990** (via Cuba, Gld) 2330 to 2356 close with EE news, local music, language lesson. Into SS at 0000. (Alexander, PA) **9565** interview on econom-

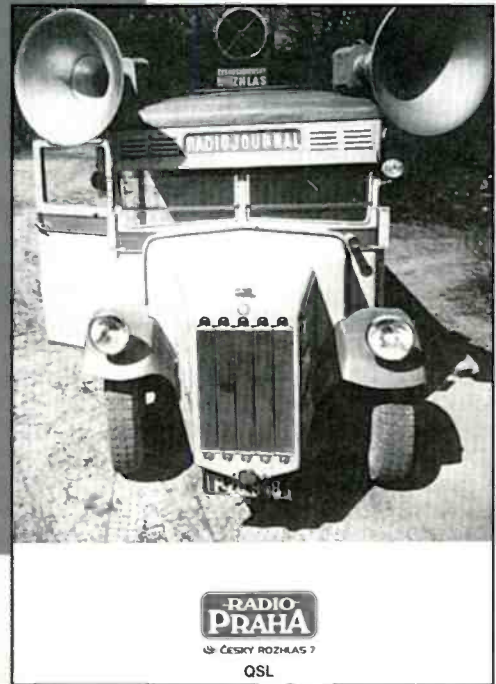


Here's a QSL from WBCQ, aka "The Planet" in Kennebunk, Maine.



The first broadcasts from the former Czechoslovakia came from this site near Prague back in 1923!

It's not quite a Lexus. This was one of the first remote trucks used by Czech Radio, circa 1935.



ics in China. (MacKenzie, CA) **9730** via French Guinea at 0447 with next week program preview. // **9560**. (Newbury, NE) **9785** at 1551 with health news, "Sports World" URL, ID and off at 1556. (Burrow, WA) **9965** in CC at 1215. (Northrup, MO) **11750** at 1932 in CC. (MacKenzie, CA) **13650** at 1350 on calligraphy in China. (Newbury, NE) 1422 with news, business, sports, and features. (Limbach, PA) CPBS/China National Radio, **9380** in CC at 1042 with talk by man. Poor, with annoying whine. (Jeffery, NY)

COSTA RICA — University Network, **5029** at 0220 to 0300 close. Dr. Scott. Better on parallels **6149.9**, **7375** and **9724.9**. (Alexander, PA)

CUBA — Radio Rebelde, **5025** in SS at 0700. (Becker, WA) on RHC's 9550 spot at 0720. Clock ticking off the seconds while man and woman read news and announcements and give a station ID every minute. The YL rolls her "R's" better in the ID. This has been heard on RHC frequencies before and in the past the broadcasts sound like they are joined in progress and end suddenly. (Newbury, NE) Radio Havana Cuba, **9820** at 0250 with "DXers Unlimited." (Limbach, PA) 0616 to North America. (Becker, WA) **0504** on **11705** with news. "Don't go away," then dead air for about 10 minutes. // **9820**. (Newbury, NE)

CZECH REPUBLIC — **7345** at 0117 with letterbox program. **11615** at 0028 with ID in EE and some other language; into SS at

0030. (Limbach, PA) **11600** at 0716 with concerns about foreign labor. (Newbury, NE)

DENMARK — Radio Denmark, via Norway, **11635** in DD at 0453. (Weronka, NC) **17505** via Norway, in DD at 1753 giving address. (Newbury, NE)

ECUADOR — Radio Quito, **4919** at 0350 with talks in SS to ID at 0400. (Brossell, WI) HCJB, **21455** with EE and music at 1225. (Northrup, MO)

EGYPT — Radio Cairo, **9900** at 0020 with talk on economic cooperation. (Newbury, NE) **12050** at 0323 in AA with Koran. **15590** in AA at 0020. QRM from KTBN. (MacKenzie, CA)

ENGLAND — BBC, **5975** (via Antigua — Ed) at 0450. **7120** to Africa, closing at 0500. **7160** at 0330 with "Network Africa." **21660** at 1512 with "Focus on Africa." (Limbach, PA) **6005** via Ascension at 0704 to Africa. (Becker, WA). **7120** at 0433 with African news, // **7160**. (MacKenzie, CA) **9580** at 0720 with diseased cattle scare. **13660** at 0310 in AA. (MacKenzie, CA) (Newbury, NE) **15220** with "Newshour" at 1225. **21470** at 1220 with feature on the Masai. (Northrup, MO) **15400** with "Newshour" at 2000. (Jeffery, NY)

EQUATORIAL GUINEA — Radio Nacional, Malabo, **6249.3**, heard at 2230 with African music. SS with possible ID at 2343, clear ID at 2254 during classical music break. Lost to jammer QRM at 2303. (Montgomery, PA)

FRANCE — Radio France Int'l, **9805** in

FF at 0615. (Becker, WA) **21580** in FF with music at 1225. (Northrup, MO)

FRENCH GUIANA — Radio France Int'l relay, **21640** in FF at 1215 and **21685** in FF at 1230. (Northrup, MO)

GERMANY — Sudwestrundfunk, **7265** in FF at 0430 with pop tunes. (Brossell, WI) Deutsche Welle, **9545** at 0737 in GG. (Newbury, NE) **11985** (via Bonaire — Ed) at 0513 with "European Press Review." **13790**

Abbreviations Used in Listening Post

AA	Arabic
BC	Broadcasting
CC	Chinese
EE	English
FF	French
GG	German
ID	Identification
IS	Interval Signal
JJ	Japanese
mx	Music
NA	North America
nx	News
OM	Male
pgm	Program
PP	Portuguese
RR	Russian
rx	Religion/ious
SA	South America/n
SS	Spanish
UTC	Coordinated Universal Time (ex-GMT)
v	Frequency varies
w/	With
WX	Weather
YL	Female
//	Parallel Frequencies



Inside and out — This is home for Radio Australia.

(via Sines, Portugal —Ed) at 0602 with "Newslink." //17860. (Limbach, PA)

GREECE — VOA relay, 7110 in AA at 0424, ID 0430 and more AA music. (MacKenzie, CA) 11965 with news at 0430. (Newbury, NE) 15205 with news at 0405. (Brossell, WI) 0504 with ID, news. (MacKenzie, CA) Voice of Greece, 12105 in Greek at 0316 with man announcer and Greek music. (MacKenzie, CA)

GUAM — Adventist World Radio, 9385 in AA at 1605 with music, man with comments. (MacKenzie, CA)

GUATEMALA — Radio Verdad, 4052.5 at 0242. Woman with religious vocal, ID and frequency announcement by man and more vocals until ID at 0256 and sign-off announcements by man. /by choral national anthem and off at 0304. (D'Angelo, PA) Radio Cultural, 3300 at 0655 with music. (Becker, WA)

GUYANA — 3291.4. Voice of Guyana, 0835. Man with "Early Bird" show, ID, religious vocals, ID "You are tuned to the Voice of Guyana, the Guyana Broadcasting Corporation. Good morning." (D'Angelo, PA)

GUINEA — RTV Guineenne, 7125 in FF with regional music at 0640. (Becker, WA)

HAWAII — KWHK, 9930 at 1220 with

Christian music. (Northrup, MO) Excited revivalist preacher at 1145. (Brossell, WI) 17510 at 0017 with listener mail. (MacKenzie, CA) AFRTS/AFN, 6350 SSB with sports news at 0709. (Becker, WA)

HONDURAS — Radio Litoral, 4832 at 0221: woman with SS ID, continuous music with no announcements in between. (Montgomery, PA) 0228 presumed with EE religious songs to "Searchlight" program at 0258. Pattern repeated on subsequent evenings but no ID heard. (D'Angelo, PA)

INDONESIA — Radio Republik Indonesia, Makassar, 4753.5 with music and announcements in II at 1230. (Barton, AZ) Voice of Indonesia, 9525 in CC at 1052. Music and woman announcer. (Jeffery, NY) 1025 in II with II music, then into CC. Also 1235 in II with announcements, ID. (Newbury, NE)

IRAN — Voice of the Islamic Republic of Iran, 9835 with political talks at 0122. (Weronka, NC) 15084 in Farsi at 2246 with talks, vocal music. (MacKenzie, CA) 15150 with continuous music at 0236. (Jeffery, NY) 17610 at 0008. (MacKenzie, CA) 0330. (Brossell, WI)

ISRAEL — Galei Zahel, 6793 in HH at 0330, mentions of Israel and "Shalom" at 0301,

ID not heard so log is tentative. Playing music in Hebrew, but one in SS. (Montgomery, PA) Kol Israel, 11605//17545 at 1705 with news in EE. (Limbach, PA) 15640 with talks and music in HH at 0420. (Brossell, WI) 17535 at 1755 with discussion of Beethoven's violin concerto. (Newbury, NE)

ITALY — AFRTS/AFN, Sicily, 4955 at 0022. ID as Armed Forces Network at 0037. EE female sounds like Lynn Russell from CNN Headline News. //12689.5 from Florida. (Montgomery, PA) 0145 with baseball game, many AFN IDs, PSAs, AP news at 0300. (Alexander, PA) RA1, 7150 at 0430. (Weronka, NC) 21520 in II at 1230. (Northrup, MO)

JAPAN — Radio Japan/NHK on 6110 (via Canada —Ed) at 0510 with news, "Asian Focus." (Limbach, PA) 9505 at 1700 with ID, news. (Burrow, WA) 1618 with interview. //9750. (MacKenzie, CA) 9695 at 1055 with news. 15590 at 1116 with letters. 17825 at 0328 with an interview. (Newbury, NE) 2235 in JJ. //11895 and 15220. 13680 in JJ at 2007. QRM from Cuba. (MacKenzie, CA) NSB/Radio Tampa, 9595 in JJ at 1035. (Newbury, NE) 9760 in JJ at 0613. (Becker, WA)

JORDAN — Radio Jordan, 11690 at 1600. Still insisting on using this frequency. Weak to poor with RTTY QRM. EE news to 1608, AA and US pops, closing announcements at 1630. (Alexander, PA)

KUWAIT — Radio Kuwait, 15495 in AA monitored at 0410. (Brossell, WI) 0411. (MacKenzie, CA) 17885 in AA at 1215. (Northrup, MO)

LESOTHO — Radio Lesotho, 4800 at 0326 with country-western. ID, long talk by woman. Brief flute music and more talk. (D'Angelo, PA)

MADAGASCAR — RTVM, 5009.7 at 0257 sign-on with IS, choral anthem and woman with opening ID and announcements at 0301. Into various vocal selections including a reggae tune. Another ID at 0324 followed by what sounded like a series of commercials, presumably PSAs from this government broadcaster. (D'Angelo, PA) Radio Netherlands relay, 15560 with talks in DD at 0415. (Brossell, WI) 0418. (MacKenzie, CA)

MALAYSIA — Radio Malaysia Radio Four domestic service, 7295 at 1557 in EE with music. Moslem theology, time pips, ID, news at 1600, Radio Four jingle, more music. (Burrow, WA)

MEXICO — Radio Educacion, 6185, in SS at 0439 with Latin music, man and woman announcers. (MacKenzie, CA) 0740 with progressive jazz. Man in SS. (Newbury, NE)

MONGOLIA — Voice of Mongolia, 12085, 1029 sign-on with IS, woman with an opening ID, sign-on announcements and EE news. (D'Angelo, PA) 1500 with IS, ID, then blocked by QRM. (Burrow, WA)

MOROCCO — VOA relay, 7195 at 0552. (Becker, WA) 7275 at 0445. (MacKenzie, CA) RTV Marocaine, 11920 in AA at 04213 with local music and talk. (Newbury, NE)

NETHERLANDS — Radio Netherlands,

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9895 in DD at 0636. 17590 via Kharbarovsk, Russia, at 0014 in DD with sports event. (MacKenzie, CA) 12065 via Russia at 1106 with program about Flamenco music. (Newbury, NE)

NETHERLANDS ANTILLES — Radio Netherlands relay, 9845 at 0114 with coverage of Peruvian elections. (Limbach, PA) 21590 at 2003 with news items. (Newbury, NE) 2019 with "Sincerely Yours" and time/frequency info for Africa. Off at 2025. (Jeffery, NY)

NEW ZEALAND — Radio New Zealand Int'l, 11675 at 1100 with closing ID and "Retune to 15175." (Not heard). (Newbury, NE) 0322 with sports news. rap. 0747 with a music discussion. (Newbury, NE) 17675 at 0136 with "Cadenza." (Jeffery, NY) 0325 with oldies, to news at 0400, strong as any local station. (Silvi, OH) 17675 with pops at 0335. Also 11675 with sports news at 1140. (Brossell, WI)

NIGERIA — Voice of Nigeria, 7255 at 0505 with "VON Link-up" (Jeffery, NY) 0517 on Nigerian penal system. (Newbury, NE) 0540 with news in EE. Mushy audio. (Becker, WA)

NORTH KOREA — Voice of Korea, 9325 in RR at 1550 and off at 1556. Back at 1601, again in RR. 9335 in EE and FF at 1555. IS and anthem at 1600 and into FF. 11710 at 1928 with ID and into Korean vocal music. (MacKenzie, CA) 9335//11710 at 1501 with ID, anthem, army news, revolutionary reminiscences. (Burrow, WA) 17735 at 0100 with revolutionary music, talk. (Barton, AZ)

NORTHERN MARIANAS — KFBS, Saipan, 9465 in RR at 1615. Woman with talk and music. (MacKenzie, CA) 11650 at 1300 with RR program. Sometime stronger than co-channel Radio Australia. Started fading quickly around 1328. (Silvi, OH) VOA relay, Tinian, 15240 with news at 1230. (Brossell, WI)

NORWAY — Radio Norway, 11635 with NN talks at 0420. (Brossell, WI)

PAPUA NEW GUINEA — NBC, 9675 heard at 0935 with news by man, short tune, back to man talking about coffee being grown in PNG, government support of coffee industry, exports. More than 20 over S9 with some fades. Strongest ever heard Nothing on //4890. Ended program with "thanks for listening, have a wonderful weekend and God bless you." Then tunes by Tina Turner. ID and time check at 0956. Time check as 8 o'clock, ID and IS, then to NBC national news at 1002. (Montgomery, PA)

PERU — Radio Madre de Dios, 4950.2 at 0858 with religious talk and music segments. ID at 0905. (D'Angelo, PA) 1000 with fast talking female anncr. in SS, nice OA flute music, more talk at 1015. (Montgomery, PA) Radio Altura, 6480.5 at 0315 with OA folk music, SS anmts., ID. (Alexander, PA) Radio Chota, 4890.2 at 0218 with rustic vocals hosted by man, ID and sign-off announcements at 0229 i/by brief vocal until the plug was pulled. No anthem. (D'Angelo, PA) 0255 with OA folk music, IDs, SS anmts. (Alexander, PA)

Radio La Voz del Campesino, 6956.6 at 0230. On late with variety of LA and OA folk music. (Alexander, PA) Rdf. Huancabamba, 6526 at 0255 with OA folk music. SS announcements, abrupt close at 0309. Very good. (Alexander, PA) Radio Andina, 4995.6 at 0142 with OA vocals, man and woman chatter. ID at 0201. Also at 0352 with long SS talk by woman, brief bit of music, more woman talking and OA vocal. Song off suddenly at 0400, though carrier stayed on. (D'Angelo, PA)

PHILIPPINES — VOA relay, 9760 with news items at 1103. (Newbury, NE) 1212 with news items. (Brossell, WI) 17740 at 2225 comments on African churches, //17820. (McKenzie, CA) Radio Pilipinas, 11720 at 1900 with EE ID, economic news. (Burrow, WA) Radio Veritas Asia, 9660 at 1505 with classical music, man preaching in RR. (Newbury, NE) Far East Broadcasting Co. 9405 at 1046 with talk by man in CC. (Jeffery, NY) 15095 at 1215 with religious program in unid. language. (Brossell, WI) 1330 in various languages including CC dialects. (Silvi, OH)

PUERTORICO — AFRTS/AFN, 6458 at 0709 with Air Force news. (Becker, WA)

ROMANIA — Radio Romania Int'l, 11940 at 0417 with talk on environmental problems, folk music. (Newbury, NE) 2350 with ID, music and into unid. language at 0000. (Limbach, PA) 15365 at 0400 with ID, news. (Brossell, WI) 21480 in unid lang. at 1225. (Northrup, MO)

RUSSIA — Voice of Russia, 9665 at 0210 with "Moscow Mailbag." 11825 at 0100 with news, 12010 at 2104 with news. (Limbach, PA) 11750 at 0410 with feature on science projects in schools. (Newbury, NE) 17620 in RR at 0050, IS at 0059 with music box, ID and URL. (MacKenzie, CA) Radio Rossii, 17660 in RR at 1531 with talk by man, ID, music. (Jeffery, NY)

RWANDA — Deutsche Welle relay, 15275 in GG at 0035. //17860. (MacKenzie, CA)

SAUDI ARABIA — BSKSA, 15170 with Koran recitations in AA at 0400. (Brossell, WI) 15275 in AA at 0407 with Koran. (MacKenzie, CA) 17895 in AA at 1215, 21505 in AA at 1210 and 21600 in AA at 1225. (Northrup, MO)

SINGAPORE — Swiss Radio Int'l, relay on 12010 at 1410 with news from correspondents. (Barton, AZ) 13735 at 1119 with listener anger over planned closure of SRI. (Newbury, NE) Radio Telefis Eireann, Ireland, via relay on 11685 at 1002 with mostly local news. Off for brief periods during the broadcast. ID at 1007 as "RTE." (Montgomery, PA) BBC relay, 9740 at 1330. (Newbury, NE)

SLOVAKIA — AWR relay, 9445 at 1610 with woman in EE, then in CC, and music. (MacKenzie, CA)

SOUTH KOREA — Radio Korea Int'l, 9515 at 1615 with music, news, language lesson. (Burrow, WA)

SOUTH AFRICA — Channel Africa, 17870 with sign-on at 1700. (Barton, AZ)

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Adventist World Radio via Meyerton, 12130 in Afrikaans at 1210. (Brossell, WI)

SPAIN — Radio Espana Exterior, 6055 at 0143 in EE with program on Sudan. 15385 at 0040 with "Radio Waves." (Limbach, PA) 15110 two men in SS with comments at 0225. 15385 with classical music at 0028. (MacKenzie, CA) 15160 with SS news at 0400. (Brossell, WI) 15170 in SS at 1220, 21540 in SS at 1225, 21610 in SS at 1220. (Northrup, MO) 0136 with Flamenco music. (Newbury, NE)

SRI LANKA — Deutsche Welle relay, 15205 to South Asia in GG ca at 0241 (Jeffery, NY) VOA relay, 15250 with music program in EE at 0251. (Jeffery, NY)

SWAZILAND — Trans World Radio, 4775 at 0400 opening GG program, ID, anmts, talk by man. (D'Angelo, PA)

SWEDEN — Radio Sweden, 9495 at 0335; interview with head of Swedish Red Cross. (Brossell, WI) 21530 at 1230 with technical problems. (Northrup, MO)

SWITZERLAND — Swiss Radio Int'l, 9885 heard at 2359 with ID and sign-off. (Burrow, WA)

TAIWAN — Radio Taipei Int'l, 7130 (direct) at 1247 with Chinese language lesson. (Newbury, NE) 5950/9680 via WYFR at 0300 with ID, schedule, news. (Burrow, WA) 9680 (via WYFR) at 0232 with mailbag program. (Limbach, PA) 11905 at 1150 with

question and answer program, address and URL at 1159. (Brossell, WI) 15060 (direct) in CC at 2240. (MacKenzie, CA) Family Radio via Taiwan, 15060 at 2215 with talk by man and woman. (Jeffery, NY)

TANZANIA — Radio Tanzania, 5050.1 at 0246 with lively local vocal selections, man in Swahili between songs, 4 + 1 time pips at 0300, ID and brief news. (D'Angelo, PA)

THAILAND — BBC relay, 5965 with news at 1200. (Barton, AZ) 17615 at 0000 with news. (MacKenzie, CA)

TUNISIA — RTT Tunisienne, 7110 with super strong signal carrying AA singing at 0350. (Brossell, WI) 12005 in AA at 0435. (Newbury, NE)

TURKEY — Voice of Turkey, 11665 in EE at 0323. (Limbach, PA) 11845 with "DX Corner" — shortwave listening is growing and its advantages over the Internet SW listening. (Newbury, NE)

UNITED ARAB EMIRATES — UAE Radio Dubai, 13675 at 0305 in AA with comments by man, woman. (MacKenzie, CA)

UNITED STATES — "KTM," 25950 carrying KGO in Portland at 2333. (Jeffery, NY) (Some kind of STL or over-the-air cueing system apparently — Ed)

UKRAINE — Radio Ukraine Int'l, 9385 heard at 0405 with "Ukrainian Diaries." (Limbach, PA) 12040 at 0330 with classical music. I believe this is formerly 12045. (MacKenzie, CA)

VANUATU — Radio Vanuatu, 7260 at 0714. Supposedly in EE but sounded more like Pidgin. Island type music, ID at 0730. Conch shell IS and into Pidgin talking. Also heard another day at 0640. (Becker, WA)

VATICAN — Vatican Radio, 6205.5 at 1308 in unid. Asian language. (Barton, AZ) 11625 at 0358 in EE to Africa. 15570 at 0514 with "Life in Cameroon." (Limbach, PA)

VIETNAM — Voice of Vietnam, 9795 (via Canada — Ed) at 0332 with party and revolutionary news. (Burrow, WA) 12019 at 1253 with economic news. (Newbury, NE)

ZAMBIA — ZNBC, 6265 heard at 0435 with African music, talk by woman. (MacKenzie, CA)

And that's it! Let's drop the confetti on the following folks who did the right thing this month: Richard D'Angelo, Wyomissing, PA; Dave Jeffery, Niagara Falls, NY; Mark Northrup, Gladstone, MO; David Weronka, Benson, NC; Bruce R. Burrow, Snoqualmie, WA; Brian Alexander, Mechanicsburg, PA; Robert Brossell, Pewaukee, WI; Ed Newbury, Kimball, NE; Brian Limbach, Pittsburgh, PA; Stewart MacKenzie, Huntington Beach, CA; Robert Montgomery, Levittown, PA; Rick Barton, Phoenix, AZ; Pete Becker, and Lee Silvi, Mentor, OH. Thanks to each one of you! (Where were the ladies?) Until next month, 73, and good listening! ■

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Resource Of The Month: The Cyber Sleuth's Quick Links Site

Based on my server logs, many of you are missing out on a resource created to make your printed copy of *Pop'Comm* more useful and enjoyable — the “*Pop'Comm's* Cyber Sleuth Quick Links” site. Each month we create web pages such that you don't have to type in a single URL found in the magazine. If a URL is noted in the magazine, whether in a column or advertisement, you'll find a “Quick Links” link to that resource. The easiest way to use the site is to grab your copy of *Pop'Comm*, go online, open the Quick Links page and select the year/month of the issue you're reading. From there, whenever you find an online resource noted in the magazine, just scroll down to the page number you are looking at and “bingo,” you find a clickable link to that resource. Additionally, all “Quick Links” are periodically updated



ed so if you manually type in a URL found in *Pop'Comm*, and it doesn't work, chances are you'll find a good link at “Quick Links.”

We've also just added a new “site search” tool. If you haven't already, give it a try. Just point your browser to <http://www.dobe.com/ql/>. ■

Other Outstanding Resources:

Remember: ALL online resources and contacts appearing monthly in *Pop'Comm* are available at the Quick Links site: <http://www.dobe.com/ql/>

LOOP ANTENNAS

Loop Antennas by James Dale, featuring LW & MW Loop Information.

<http://www.frontiernet.net/~jadale/Loop.htm>

With the Winter DX season just around the corner, a resource well worth checking out.

PROGRAMMING—FCC DATA

If you've got a copy of Microsoft's Visual Basic Professional v6.0 this is for you!

<http://www.fcc.gov/oet/info/software/suss/>

Site contains source code for Spectrum Utilization Study Software (SUSS) Nice!

HOMEBREW

Here's an easy way to mark drill holes for mounting various components.

<http://www.dobe.com/ql/hbtips/>

Especially useful for mounting air core variable capacitors and like components.

DIGITAL RADIO

From the BBC, everything you ever wanted to know about Digital Radio — and more!

<http://www.bbc.co.uk/digitalradio/text/>

You'll find a wealth of easy to understand material in the site's “Information” and “FAQ” sections.

OFFSHORE PIRATE RADIO

Pirate Radio of the Offshore Kind by Barry Bridel

<http://www.guernsey.net/~bebridel/>

Another nice site dealing with the history of offshore pirate radio, mainly in Europe.

HAM RADIO

eHam.net — Comprehensive site for the Radio Amateur operator by Bill Fisher, W4AN.

<http://www.eham.net/>

September 1, 2001 marks eHam.net's 2nd Anniversary. Congrats Bill!

RADIO MAILING LISTS

At QTH.net. Select and subscribe to your choice of radio related mailing lists.

<http://www.qth.net/>

Check out the site's FAQ section for more information about mailing lists.

AM RADIO

Online photo album of several AM radio stations by Patrick Griffith.

<http://community-2.webtv.net/N0NNK/>

See page 63 of the Sept. 2000 *Pop'Comm*. For more info in Bruce Conti's column.

REMOTE CONTROL CODES

Universal Remote Control Codes by Daniel Rogers

<http://www.xdiv.com/remotes/>

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New Hobbyists Still Being Impressed By Sideband

I think it's great when a young radio hobbyist writes to share his excitement and sense of discovery. I got such a note from Jason from the Palm Beach area of Florida, who, among other things, has fallen in love with SSB.

"I'm extremely new when it comes to talking on SSB," says Jason, "but I must say, after contacting Canada from central Florida — while mobile — I'm in love with this mode of transmission. I was wondering if you could help me understand exactly goes on with the radio wave while in SSB mode? I do know that the carrier (normally on AM) does not exist while in the SSB mode and that it uses the lower or upper part of the wave (?) but I'm not sure how the wave travels. Do you have better propagation when using SSB due to the lack of carrier? Does a SSB wave travel farther than a regular AM wave given both waves have the same output power even without propagation in play?"

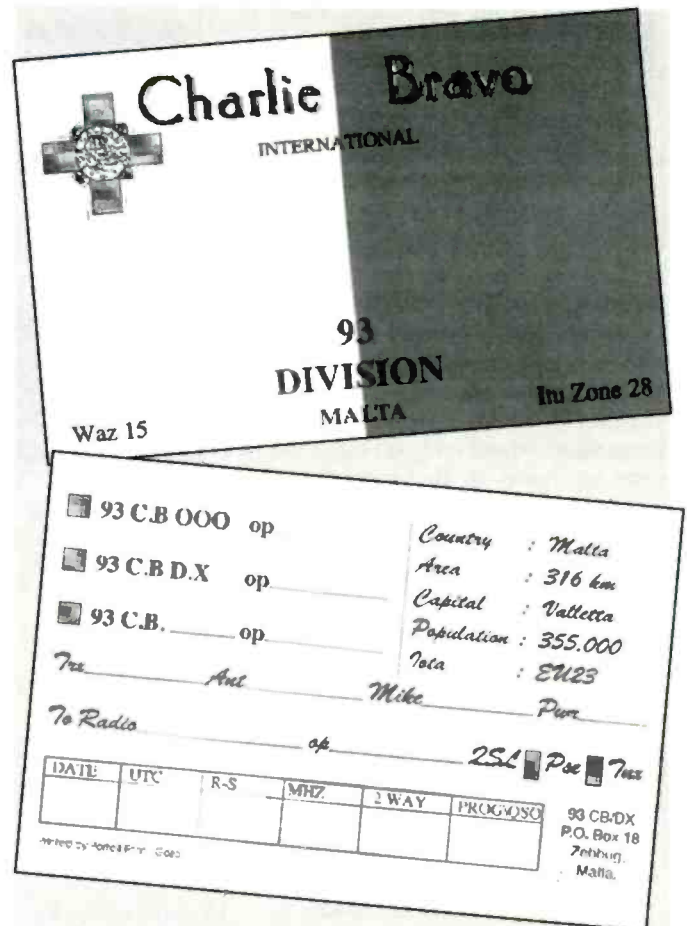
Jason, I'm not an expert, and space here wouldn't allow for a full explanation, but let me try to sum it up to the best of my limited technical ability. AM and SSB use (or are) the same as far as 'waves' (length) go. That means that they propagate pretty much the same. Then main difference is that the amount of signal (power output) is greater, possibly up to three times greater, when you transmit an SSB signal than it is when you transmit on AM. As an example, take the nozzle off of a garden hose and turn it in. Measure how far the water squirts from the end of the hose. Now put the nozzle back on and adjust it to a highly concentrated stream. See any difference in how far the water squirts? Think of AM as the hose without the nozzle and SSB as the hose with a nozzle adjusted for maximum range. While there are several other factors that enter into the equation, in short, SSB goes farther than AM because it delivers a more powerful signal.

New CB DX Club In Malta

Because SSB goes farther it has become the favorite mode of DXers all over the world, who just like you, never cease to be amazed how far a little radio can go. Take, for example, Joe in the Mediterranean Island nation of Malta. Joe is a long-time DXer who has started a new CB DX club called Charlie Bravo International. Joe's callsign is 93 CB 001. I met Joe, and a number of other 11-meter enthusiasts from around the world, on the Internet using a free radio-like chat program called PalTalk, <http://www.paltalk.com>. You can too. Just check the PalTalk groups list under "Miscellaneous" and look for or start a group with 11-meters in the name.

Where Have All the Truckers Gone?

Got a note from Earl, eallum@bpsd.mb.ca, who read an article in the January 2001 edition of *Popular Communications* by Gordon West about radio communications in Alaska. In the article Gordon mentioned Mike Romanello, an Alaskan trucker who drives between Alaska and the lower 48. The article goes

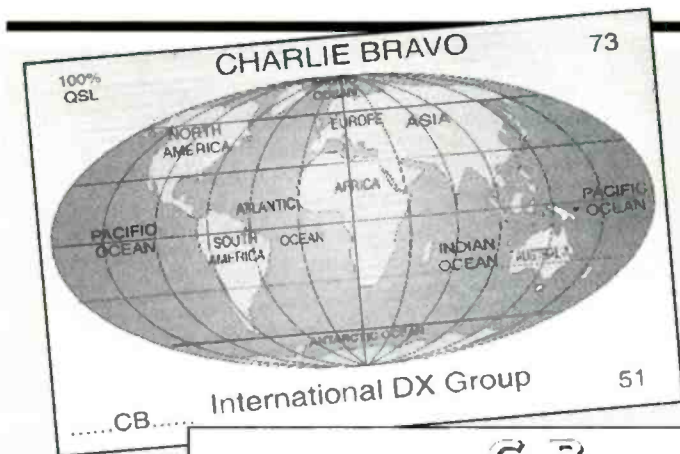


New target for DXers and QSL collectors alike from one of the world's newest CB DX clubs located in the Mediterranean.

on to point out that Mike and other truckers in Alaska often use more than just CB Channel 19 to communicate and that peaked Earl's interest.

Well, Earl, that is true, as surely as all the folks you hear on Channel 19 aren't truckers, all truckers aren't on Channel 19, at least not all of the time. And that is not only true in Alaska, it is the same everywhere you go. Mike, according to the article, is a licensed Amateur so he will be found in places where other truckers can't talk (or at least shouldn't — see FCC Enforcement below). Ya'all can listen but NO TALKING!

West also mentions that these truckers also use some 155 MHz high-band channels and that peaked my interest. 155 MHz is a little too high to be an Amateur frequency (144–148, 222–225 and 420–450 MHz are as close as they come) so unless they are operating on an otherwise licensed system — or worse, illegally, I think I know where they are. 155 MHz is just about the frequency of the new MURS (Multi-Use Radio Service). If they



CHARLIE BRAVO D X

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Joe, 93 CB 001, reports many European, Asian, and African contacts and occasionally some from "the States."

are on MURS then you can talk there. These frequencies were made available (legally) to the public late in 2000. You might have a little trouble finding decent radios for this new service (manufacturers haven't caught on yet) but you can use existing "Color Dot" radios or scanners on the following frequencies: 151.820 MHz, 151.880 MHz, 151.940 MHz, 154.570 MHz, and 154.600 MHz.

Earl also asked about the antenna mentioned in the article, the "Outbacker Perth" rumored to be an outstanding HF multi-band mobile antenna. It had better be. I looked it up on the web and it costs around \$300. You can, of course, accessorize it and run it up to around \$1000 if you like. Romanello and West no doubt use it for Amateur HF (long range) communications but you can use it on CB or the Freeband, which by the way, is where you will also find many truckers. In any event, if anyone has any more suggestions where Earl and I can tune in I would appreciate hearing from you.

Computers On CB?

Kevin, from Sioux City Iowa, has a problem using his phone. It seems that his

kids, "tie up the phone chatting with their little friends online." Kevin is thinking of solving the problem by "hooking their machines up to sideband CBs and running PSK31, which is the new and wildly successful digital mode. All these kids are in the same school district and range should be no problem." It seems, however, this raises a couple of other problems. First of all, I think it would be illegal for you to do it. Kevin, since to the best of my knowledge you can't use digital mode on CB (that is why I did not use your full name, callsign or E-mail address here). Further, it could be dangerous, prolonged, relentless, and aggravating interference to local communications could be easy to track.

In any event, all kidding aside, he is up against a technical problem that he hopes readers of this column can help him solve. He wants to, "use a PTT scheme described in the builders resources pages of the Elecraft website using an opto isolator but CB rigs, like my Uniden Grant, use a receive pin and I am not sure how to do it." So, Kevin asks if anyone has a clue please let me know and I will pass it along. Alternatively, Kevin, you might consider using MURS radios which do allow digital communications and, when combined

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FCC Enforcement

The Gary L. Gribble Trucking Company of Rockwood, PA, has received a warning notice from the FCC. It seems that, "The Commission has received information that you have been operating radio-transmitting equipment without a license on frequencies in the Ten Meter Amateur bands," the letter states. "Your trucks were monitored transmitting on Ten Meter frequencies while enroute to and parked at Howard and Lodge Streets in Albany, NY." The letter then goes on to advise the truckers of the \$7,500 to \$10,000 fines they may face and requests that they call the FCC to discuss the matter.

Gary, you had better call. If you don't, they get real testy! Take the case of Jerry Smith of Claymont, Delaware. Mr. Smith ignored one or more attempts by the FCC's Philadelphia office to discuss his operation of a Citizens Band (CB) radio station. It seems that they thought he was using with a non-type-accepted transmit-

ter, with a transmitter output power greater than four watts carrier power in the AM (A3) mode, and with an external RF power amplifier. With the possible exception of the external RF power amplifier, sounds a lot like what you were doing in Albany. Well, to make a long story short, Mr. Smith has been fined \$13,500!

September And October CB Mixers

For those of us who find the act of "randomly contacting" on the air very exciting and alluring, why not make plans to attend the next, regularly scheduled on-air CB Mixer? They are held, wherever you are, on the last Saturday of the month. The next two will be on the 29th of September and October 27th from 9 p.m. until 10 p.m. local time. SSB operators work channel 36 LSB. AM operators work channel 23.

Well, that is it for now. Thanks for writing me here at the magazine or via the Internet where my address ed@barnat.com. And as always, if you can (especially September 29th and October 27th) — catch me on the radio! 73

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Steve is a young pioneer in the merging of radio broadcasting with the Internet, and is living his dream of being a global broadcaster. He has over 15 years of experience in all aspects of traditional radio including ownership, programming, operations, engineering, and sales — making him a well rounded and experienced broadcast professional. In addition to his expertise with broadcasting technology, Steve is blind. He runs and manages WOLF FM from his PC-based station using sophisticated, voice-enabled, software. BRAVO Steve!

WOLF FM streams at all rates so even if you're limited to a slow modem, you can still enjoy the music. But, if you've got the bandwidth, you'll really enjoy the 128K Stereo MP3 Stream. While the Windows Media Player is highlighted at the site, I'd suggest using the WinAMP Player for maximum enjoyment. Don't miss WOLF FM.com! While you're there, be sure to read Steve's bio.

Visit, listen, and bookmark <http://www.wolffm.com/>.

The Auto Channel

It's not often that you'll find me at a loss for words when it comes to chatting about an Internet resource. But, trying to describe this incredible site in a short paragraph is one of those times — there's just no way to adequately convey the quality and vastness of this resource in a few words. Regardless, I'll try to touch on some of the high points. Media Archives — thousands of streaming media clips including Cybercasts, Repair, Maintenance and Safety, Special Events, Vehicle Reviews, Automotive History, etc. Comprehensive coverage of auto rac-



If it's auto related, it's here!

ing and culture, (NASCAR, STOCK, DRAG, etc.) including a dozen magazines, live webcasts, bulletin boards, classified ads, photo gallery and much more. New Car Buyers Guide — gives the rundown on new cars, organized as a comprehensive, clickable list of models. Includes reviews, crash-test ratings and recall details. Used car prices including wholesale and retail. News and happenings as they pertain to the automotive industry. Reports on automotive stocks, product recalls, and editorials. Ah heck! I haven't even scratched the surface yet. Suffice it to say, if it's auto related, it's there! If you're a 4-wheel drive enthusiast, be sure to check out the “Back Country 4x4 adventures” videos. Autochannel.com is simply AWESOME! Don't miss it!

Check them out at <http://www.theautochannel.com/>.

Sound Money

Produced by Minnesota Public Radio, SOUND MONEY offers practical solutions to life's financial problems and market analysis in terms you can *understand*. Sound Money is public radio's only live call-in program on personal finance. Each week, co-hosts Debra Baer and Chris Farrell answer questions from listeners on a variety of investment topics. Farrell also offers insight on the latest financial trends, and money manager Erica Whittlinger stops by to talk about timely investment themes. In “Smart Choices,” a guest expert focuses the discussion on a specific money management topic, from taxes to consumer debt to financial aid for college. Weekly commentaries offer advice about the practical problems of the workplace and the marketplace. You can listen live (broadcast schedule posted at the site) or listen to previous broadcasts via archived files. In addition to streaming audio, you'll find a wealth of financial information in standard print format. If you click on the “Listen

Nostalgic Radio And TV

BostonPete.com, located in Boston, MA, is a commercial site selling a variety of old time music, videos, and other nostalgic media on CDs, DVDs, and tape. While that's not extraordinary, the ability to listen to short clips of most audio selections and vintage prices ARE! But, that's not all! You can also tune-in

BostonPete.com — "The Best In Old Time Media Entertainment!"

(for FREE) to Original Music and Radio Drama Programming like the MEMORY MUSIC HALL with Russ Butler, RADIO CLASSICS LIVE with Alan Chapman, the CLASSIC OLD-TIME RADIO HOUR with Art Singer, SOUNDSTAGE with Bryan Wright, the GOLDEN MELODY SALOON with Will Hutchins and FIFTIES FEST with Pauline Downing. All programs are changed bi-weekly, webcasted via RealAudio and are WebTV Compatible. BostonPete.com is one of the FEW commercial sites that I thoroughly enjoyed visiting. I think you will too. Check 'em out at <http://www.bostonpete.com/>.

History Of The Transistor

Compton's Encyclopedia Online (<http://www.comptons.com/>) describes "the transistor as a solid-state electronic device used primarily for switching and amplification. Since John Bardeen, W. B. Shockley, and W. H. Brattain invented it in 1947, it has almost entirely replaced the vacuum tube in electronic devices. It is more reliable, more flexible, and smaller in size, and consumes less electricity. Its application ranges from small radios to the most sophisticated space probes. The transistor revolutionized both electronic communication and computation."

Learn about the development of the transistor at this PBS site.

MINNESOTA PUBLIC RADIO PRESENTS

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Find quick solutions to financial problems right here.

Live" link and no show is currently being aired, you'll be treated to some really nice classical music. An excellent resource — check 'em out at <http://money.mpr.org/>.

World Radio Network

World Radio Network (WRN) provides a global perspective on current world events via live (and archived) newscast audio streams 24 hours a day from 25 of the world's leading public and international broadcasters. Listeners can hear the news live, in English (and other languages) direct from its source. In addition to news, WRN offers extensive coverage of the arts and culture, music, sports, science, and developmental issues associated with the various countries. Basically, WRN provides a superb, easy-to-navigate, "gateway" to International Radio Broadcasting. If you've spent much time listening to normal shortwave broadcasts, you'll feel right at home since most of WRN's programming is the same as you would normally hear on your SW receiver. The BIG difference is quality (no reception problems) and the ability to listen on YOUR timetable. When I visited WRN in June, they were also beginning to carry video files of broadcasts from around the world. Nice addition! If you're tired of hearing the mainstream media moguls' slant on things, checkout WRN and get it directly from the source. Visit <http://www.wrn.org/>.

Experience a global perspective on current world events at WRN.

Transistorized, a PBS production, leads in by stating: "The transistor was probably the most important invention of the 20th Century, and the story behind the invention is one of clashing egos and top secret research." Originally produced for TV, this "web" version of the show delves even deeper into the development of the transistor. While you'll find more text than audio or video, multimedia clips are used throughout to reinforce concepts and add "depth" to the presentation. Normally I wouldn't mention a mostly text site in "iWaves," but Transistorized is an exception. Take a peek! (Be sure to view the "Resources" section for information on the streaming media resources used. They're at <http://www.pbs.org/transistor/>.)

Sports news, interviews, commentaries — Sporting News Radio has it all check it out today!

Sporting News Radio

From the "Company Profile" of Sporting News Radio: "Headquartered in St. Louis since debuting in 1886, *The Sporting News*, is the nation's oldest sports publication and one of the most respected information sources in sports. Sporting News Radio (formerly One-On-One Sports) was founded in 1991 and is the nation's largest sports radio network with over 425 affiliates reaching 13 million listeners each week across the U.S., Canada, and the Caribbean. The merging of *The Sporting News* and Sporting News Radio creates a powerful media entity - one that provides the best in comprehensive, national sports coverage from multiple sources, as well as instant recognition to millions of listeners, users and subscribers. On air, Sporting News Radio draws on the expertise of *The Sporting News* writers and columnists and www.sportingnews.com now features Sporting News Radio's live audio stream, archived interviews with athletes, coaches, and experts from the Audio Vault, and online communities for each radio show host." If you enjoy sports, you'll LOVE Sporting News Radio on the Web. Visit <http://radio.sportingnews.com/>.

World Of Radio

Glenn Hauser's World of Radio Website is a resource where you can listen to late-breaking news about the world of short-wave broadcasting. His Continent of Media (Real Audio) radio program provides DX tips, broadcast insights, and the latest developments (and gossip) from the world of domestic and international broadcasting. Most broadcasts run about 30 minutes.

His programs are also carried on several mainstream stations. Schedules and frequencies for those broadcasts are also available at the site. Some interesting stuff — point your browser to <http://www.angelfire.com/ok/worldofradio/>.

Well, that's it for this month. If you have a favorite streaming media resource, or if you're looking for one, be sure to let me know about it. Chances are that other *PopComm* readers will be interested too. Until we meet again next month, happy listening and viewing. ■

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<http://www.real.com>

WINDOWS MEDIA PLAYER

<http://www.microsoft.com/downloads/>

APPLE'S QUICK TIME PLAYER

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Get your player(s) or Upgrades/Updates at these URL's.

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HOT New Item!

Supreme Court Upholds First Amendment In Cell Phone Intercept Case

The United States Supreme Court has taken a stand for the First Amendment and struck down a provision of the Electronics Communications Privacy Act. The ruling in *Bartnicki v. Vopper* (99-1687, 200 F.3d 109) relates to a case in Pennsylvania first reported on by Alan Dixon in the October 2000 *Pop'Comm*. During collective bargaining negotiations between a high school and the local school board, someone intercepted and recorded a cellular telephone call between the union negotiator and the union president. Later, a public affairs talk show host played a tape of the conversation on the air. The negotiator and union president filed a damages suit under state and federal wiretap laws, alleging that "their conversation had been surreptitiously intercepted by an unknown person; that respondent Yocum, the head of a local organization opposed to the union's demands, had obtained the tape and intentionally disclosed it to . . . media representatives; and that they had repeatedly published the conversation even though they knew or had reason to know that it had been illegally intercepted."

The District Court found that under the language of the statutes "an individual violates the federal Act by intentionally disclosing the contents of an electronic communication when he or she knows or has reason to know that the information was obtained through an illegal interception, even if the individual was not involved in that interception." The question of whether this interception was intentional raised an issue of material fact and the Court rejected the defense of First Amendment protection. The Supreme Court interceded and found "the statutes invalid because they deterred significantly more speech than necessary to protect the private interests at stake." The final ruling stated that the First Amendment protects the disclosures made by the respondents.

So, does this mean it's legal to monitor wireless phone calls? No, the law still stands. What has changed is that disclosure by a third party may be legal in some cases. I would expect to see new cases argued separately as they arise. And of course, this ruling may push Congress to pass even tighter legislation against monitoring and interception.

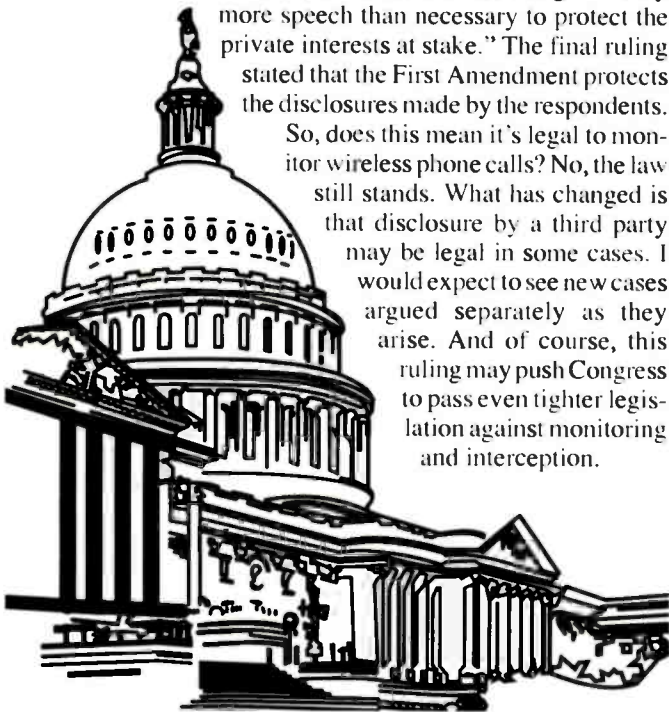
On a side note, Alan Dixon points out a remark made by the Supreme Court regarding the ECPA in general: "There is no evidence that Congress thought that the prohibition against disclosures would deter illegal interceptions, and no evidence to support the assumption that the prohibition reduces the number of such interceptions." Thanks, ladies and gentlemen of the court, for saying what we've been saying for years!

The Commission Affirms Scanner Rules Regarding Cellular

The FCC recently struck down an attempt by the Tandy and Uniden Corporations for exemption from FCC rules that require scanners to be difficult to modify to receive cellular calls and to bear a warning label. The two companies asked the Commission to exempt scanners that "are built with the capability to receive only frequencies much lower than those capable of intercepting cellular signals from the circuitry inaccessibility requirement and the warning label requirement." They stated that the inaccessibility requirement would likely increase the manufacturing cost and make future repairs difficult on scanners that only receive the 30-512 MHz bands. They also claimed that the warning label requirement would necessitate additional steps in the manufacturing process or require tooling changes, which would increase costs. The FCC responded by affirming their earlier rules which require that scanning receivers include adequate filtering preventing them from receiving cellular phone calls, that they be designed so that their tuning, control, and filtering circuitry are not easily accessible and any attempts to modify the unit receive cellular transmissions would likely render it inoperable, and that a warning label be applied to receivers to let users know that such modification is a violation of FCC rules and Federal law. All scanners manufactured or imported after October 25, 1999, are required to meet these regulations.

When the FCC declined Tandy and Uniden's request for reconsideration, they explained that, "a scanner that is intended to tune only below 512 MHz does not ensure that reception of cellular telephone frequencies will not occur. For example, a superheterodyne receiver is capable of receiving images at frequencies separated from the tuned frequency by twice the first intermediate frequency of the receiver. Within a scanner having a first IF frequency of 250 MHz, image reception of the 800 MHz cellular telephone bands could occur when the scanner is tuned in the 300 MHz range. For this reason, some scanners that tune only up to 512 MHz could potentially be modified to receive cellular telephone frequencies." The Commission did, however, grant a request to apply warning labels on the packaging and owner's manual on scanners that are too small to permit the entire label on their cases.

The FCC also clarified a minor rule change, which modified the language to describe a scanner receiver as one that switch-



es between four or more frequencies to one that switches between two or more frequencies. Though Uniden expressed concern that this would place their NOAA weather receivers under the scanner receiver requirements, the Commission said this was not their intent and further modified the Section 15 definition to read that "receivers designed solely for the reception of broadcast signals under Part 73 of this chapter, for the reception of NOAA broadcast weather band signals, or for operation as part of a licensed service and not included in this definition."

Part 15 Amendment Proposal

The Federal Communications Commission has proposed a revision to its spread spectrum rules to reduce the amount of spectrum that must be used for such systems in 2.4 GHz band. It is also pushing a proposal to allow new digital transmission technologies to operate under the same rules as spread spectrum. According to the Commission, two types of spread spectrum are permitted to operate on non-licensed basis under Part 15 of the FCC rules: frequency hopping spread spectrum and direct sequence spread spectrum. Both types spread the signal over a wide bandwidth. New digital technologies now available are similar to spread spectrum, but can't be authorized under the current rules because these rules limit operation only to spread spectrum systems. The Commission has proposed to remove these restrictions. They have also granted a blanket interim waiver to allow new digital technologies that meet existing rules the obtain FCC equipment certification prior to final adoption of these rules. For more information, visit the FCC web site and search for FCC 01-158.

Florida Bill SB 1762 Would Restrict Trunking Info

Listeners in Florida are breathing a sigh of relief now that a proposed bill has fallen off the Senate calendar. **SB 1762** would have exempted from disclosure "technical information pertaining to trunking radio communications systems and mobile data communications systems used by governmental agencies." In plain terms, it means information about police, fire, EMS, school districts, water districts, and other agencies' communications would be unavailable to the public. While the bill was actually intended to prohibit transmit access and monitoring of encrypted or privileged communications and to keep criminals from information that would help them monitor trunked systems, it would have been a definite blow to scanner listeners in the state, not to mention setting a precedent. Information protected by this bill would have been "trunking format data, mobile data terminal information, coded radio identification information, information pertaining to internal system structuring (agency/fleet/subfleet structure and identification data), system keys, encryption codes used to facilitate secure communications, and control channel data format information." Though the bill has died on the calendar, that doesn't mean its gone for good.

Shell Chemical Company Asks For Frequencies In Texas

The Shell Chemical Company has asked the FCC for a waiver of its rules to allow use of unassigned Part 22 Public Mobile

Service channel pairs. Shell says that its Deer Park, Texas, petrochemical facility is in need of a reliable trunked radio system to "overcome interference and operational inefficiency experienced with conventional systems." The company also says that there are no alternative frequency options available near Houston, Texas. The frequencies requested are: 488/491.025 MHz, 488/491.0500, 488/491.075, 488/491.1000, 488/491.125, 488/391.150, 488/491.175, 488.491.2000, 488/391.225, 488/491.2500, and 488/491.275. Shell also offered another proposal using 6.25 kHz offset frequencies. The full text of the waiver request (FCC File No. 0000394166) is available at www.fcc.gov/wtb/uls.

Unlicensed FM Radio Operator Arrested

The Federal Communications Commission brought the long arm of the law down on an unlicensed broadcaster in the FM radio band. Ibar (Robert) Mohamed was arrested by the United States Marshal's Service following an FCC Enforcement Bureau investigation that found him operating on 89.3 MHz in Queens and Brooklyn, New York. Mohamed had ignored previous warnings to stop transmitting and even had his radio equipment seized twice. The FCC finally snatched him for violation of Section 301 of the Communications Act of 1934. The penalties range from monetary fines to equipment seizures, to imprisonment. Over the past 18 months the FCC has conducted over 300 investigations of unlicensed stations. ■

Tuning In (from page 4)

of wanted criminals. It was decided that Sgt. Ward would be the ideal first recipient of this award.

The program is open to U.S. and Canadian citizens 18 years and older with a junior category for ages 5 to 17. The latter category was established in response to numerous recently publicized cases of help rendered by young people using FRS radios.

According to Jim Bazet, president and CEO of Cobra Electronics, "We pride ourselves on the ability of our products to enhance the quality of life of our loyal consumers, and we take particular pride in the fact that Sgt. Ward used one of our radios in this most heroic act."

Chuck Thompson, president of REACT International, Inc. adds, "This is an idea that is overdue, and REACT is very happy for the acceptance and generous support of our concept by the co-sponsors."

Sgt. Ward was presented a plaque from REACT International, a new CB radio, microphone, and antenna from Cobra, and a free subscription from *Popular Communications*. Cobra also presented CB radios to the two officers who assisted Sgt. Ward in the arrest.

Sgt. Ward is shown in the photo accepting a plaque from Mr. Bill Thourling of Cobra Electronics. Also attending the ceremony was Mr. Jack Murrell on behalf of REACT International.

At this time, the "Radio Hero Award" will be presented every six months. Judging will be based on application forms and accompanying documentation to verify the event. Information is posted on the REACT website at www.reactintl.org. If you know of a deserving individual, let us know today!

Our thoughts and prayers are with the victims of this violent crime. John Walsh is correct, you know, when he says, "You can make a difference." Sgt. Ward certainly did. ■

The Future Is NOW: Computer-Assisted Radio — Part I

It is notable that with this year being the 100th anniversary of Marconi's reception of the letter "S" in North America by wireless communications, it's also the beginning of an exciting new period for all of us involved in radio monitoring. While much of the technology that I am going to be referring to is not new, what is new is the way that it is being applied to radio design is new.

What we are going to be seeing over the next five years is a transformation in the way that people design and use radios. The old model of radio monitoring, with knobs and dials, will become increasingly obsolete. What we are going to be seeing from here on in is the digital radio, where the design of its circuits will be software based rather than upon hardware.

Over the next few months I am going to be focusing on these changes in a very detailed way. The utility radio monitoring focus of the column will not be lost during that time, and I will still be providing theme columns on specific targets to listen to. However, what the column will be emphasizing is how to use computer-assisted radio to make the most efficient use of your monitoring time in order to capture ute stations with greater ease than ever before.

What I am going to be targeting for the readers of this column is a guide to the successful set-up and operation of a computer-based monitoring station. What will be important to understand is that in order to be successful in undertaking such a project you do not have to buy the biggest, fastest personal computer available, nor spend large amounts of money on software.

What the columns in this series are going to show you is that a good used personal computer, or even your existing equipment, will be more than adequate to do the job. Likewise, many of the software packages that will do wonders for the performance of your computer-aided receiver are available for free.

What will be even more important to understand is that even if you decide to start from scratch and set-up a station using one of the new "black box" computer radios, the overall cost will be less than many new console-type receivers that have less features and performance.

This month I will start off by introducing you to the concept of computer-assisted radio by giving you an outline of its potential. You will see that the time has come to leave behind a whole range of assumptions about what a monitoring radio is, and how it is used, and move into a whole new way of doing things.

I also have letters and logs from you, the readers. This month's logs are particularly good, coming from the able monitoring



Before the advent of satellite-based navigation the U.S. Navy operated an extensive HF direction finding network. PopComm reader, Fred Muller took this picture in May 2000. It shows the Wullenweber antenna located at the Naval Computer and Telecommunications Station on Guam. The station is now decommissioned and has been all but abandoned.

skills of over 10 readers. I have to say that I am really very pleased with the support that the column has had from all of you, both contributors and readers.

What Is Computer-Assisted Radio?

The year is one that is not too far away from today, but it is closer than you may think. John, a typical ute monitor, is in the final stages of setting up his new computer-assisted radio monitoring station. He still has a couple of "old standby" radios from the late 1990s, but they are now off to the side, and frankly are kept more for sentimental reason than anything else.

For the last few hours John has been working in his basement setting up his new radio, or rather radios. Located in the same room where he keeps his server computer for his home local area network, John has set up a group of six small black boxes.

There is nothing much to see with the boxes. They are cube shaped with roughly four inches on each side. Other than the company logo, there is nothing on their front to indicate what they are. On the back of each are connection spots for power, an antenna, and a computer interface.

John has carefully attached six separate antennas to the connections of the black boxes. Each coax is terminated at a special active antenna that is discretely placed out in his backyard. While small, the newly developed design of the active antenna makes it very efficient and quiet to use with the new receivers. Because of the antenna's small size John does not have to worry about



This black box may forever change the way radios are used. Add a computer, a local area network (LAN), the Internet and some simple to use software. Using the Internet you can connect up to the receiver using a remote computer, and both control and listen to the receiver.

complaints from his neighbors or violating any community covenants about wire or tower based antenna setups.

Back in the basement, John is now attaching each of the black boxes to the back of the server computer. Like most people John has been able to take advantage of the great drop in price in networking hardware that has occurred since the late 1990s. One of the important features of this home network is the fact that it is hooked up to a high-speed Internet connection, allowing every computer in his home to have fast access to websites and services.

Having finished that, John heads back upstairs to his main computer. There is nothing very special about his setup, and the computer has all of the standard accessories one would expect in the early 21st Century. There is the usual printer and flatbed scanner, as well as a regular telephone hook-up for receiving computer-based faxes. There is a nice five-speaker set-up for listening to surround sound music recordings and when watching DVD's. As with most personal computers of that time, John also has a small video camera for doing video conferencing and chatting.

At this point John begins the most important part of the set-up of his new monitoring radio system; he puts his control software for his radio into his computer and starts the installation. On the screen of his computer he is greeted by a self-starting installation "wizard." This is in the form of a video presentation congratulating him on his newly purchased radios. It does not stop there though, for the installation program now begins to ask him questions about his radio monitoring interests and what he wants to accomplish.

Going through the questions one by one (and I will leave it up to the crystal ball gazers to say whether John uses a keyboard or speech recognition to answer them) when he is finished, the computer goes through a series of calculations. When it stops, the result on the screen is a control software package that has been custom designed for John's monitoring needs.

What this means for John is that the software package has taken his requirements and implemented them in several ways. First, the radios in the basement are each given an assigned range of frequencies to monitor all the time and in an optimal way for the type of stations he wants to listen to. With the advent of home networking, computers are only turned off for maintenance or upgrades (in fact when John attached the radios to the server computer he did not have to turn it off). The radios, and the software package, now work 24/7 to listen to and track all traffic that can be monitored.

At the same time that the radios are being configured over the network, the software is also making connections on the Internet

as well. Part of the package links into several sets of ute frequencies that are updated on a regular basis. Likewise, John is also automatically added to a number of discussion groups that are interested in the same ute services that he is. The same software package also connects up with John's existing station logging program.

At this point the computer-assisted radio program is finished installing, and tells John so. The video presentation takes John through a tutorial on how to use his system, and reminds him that if he has any trouble using it he can get technical assistance online, and through video conferencing as well.

So now your radio hobbyist, John is finally ready to take his radio monitoring system out for a spin on the HF spectrum. At this point he opens up the entire software console to see what is happening. What he sees is nothing like the traditional radio of the 20th century. Instead of buttons and knobs he now sees readouts of processed information.

The best way to visualize what John is looking at is to think of a "fish finder" display. Just as in the same way that a fish finder looks for schools or individual fish under the water, John's computer-assisted radio is looking for radio activity in the same way. Rather than John spending a lot of time listening to static and irrelevant stations, the radio targets "best choice" stations based upon its calculations.

So what John now does is listen to a selection of frequencies that are showing activity that will have the greatest chance of being the type of radio service traffic that he wants to hear. At the same time as he is doing this, a message pops up in the message box of the software program. It is from another ute monitor and has come across the Internet to his home. The message says that such and such activity is taking place at such and such a frequency. John punches the number in and listens, clicking on another icon on the screen to log it. He also makes a short recording of the sound station with his computer.

It should be mentioned that all of the sounds for the radios in the basement are being carried through John's home network to his computer, and then being played on his main computer's speaker system. Likewise any commands for changing frequencies or reconfiguring the system also take place over the same home network. But that is only the beginning.

Later on John goes off to work, and at his office he has an understanding boss who allows him to use his work computer for limited personal access to the Internet. What John does is install a small software program from that same computer-assisted radio program on his office computer. After providing some simple network addresses, John's work computer is now connected to his radios at home via the Internet. He is now able to do some radio monitoring during his breaks and lunch hour, and do all of the functions at this remote location that he can do at home.

Yet that is not all. John also has a laptop computer that can connect to a wireless network that he subscribes to. The service allows John to access the Internet and his radio at home anywhere there is coverage. As a result John is able to go out to the park at lunchtime and listen to his radios remotely.

On top of all that John can also connect to other similar radios around the world via the Internet, and share his own as well with other people. John can now listen to stations that he could not hear at home due to unfavorable conditions or location. In fact many people don't even bother to install the radios anymore, especially if they live in apartments. Most people use on-line subscription services available through the Internet that allow

them access to banks of radios located around the world for a reasonable fee.

All in all, John enjoys his radio monitoring more than ever. He has more access to radio monitoring opportunities than he ever had, and his ability to track and log stations has greatly improved. Some of the old timers object to this ease, feeling that people are not really "earning" their logs because it is too simple to do. But what most people find is that by eliminating the frustrations and disappointments of the old style of radio monitoring, more time is spent actually listening to what is going on.

So Where Are We Going?

Nothing in the story about John that I have just told you is fiction. Everything that I described is either available now, or is in development. Really and truly this could be the way in which radio monitoring is done within the next five years. Right now home-based networking is a reality, as is inexpensive high-speed connections to the Internet.

More importantly, true black box radios, such as Ten Tec's RX-320 are a reality and they will be transforming the way in which monitoring is done. One example of that is the chaining of multiple boxes together to create a "super radio" that I just described. The RX-320 is capable of that, and software is now available to take advantage of that fact.

The question then is are you ready for this new technology?

Again, over the next few months I will be providing you with the information you will need in order to be able to set up a station just like John's. It will not be science fiction, but fact. The only limitation today is that there is no one software program available that will put everything together as I described. But that will change very soon — if there is demand for it.

Welcome to the future of utility radio monitoring, and follow along with me as I help you understand it and use it to your advantage.

Reader's Letters

Please keep those E-mails and snail mails coming as each and every one is appreciated. Our first letter relates to an interest in VLF radio monitoring.

Mr. Cooper,

I've been in the radio hobby for 35 of my 41 years. I am an active ham on VHF and UHF. I have recently started to listen to the 150-kHz to 529-kHz band and have heard and logged beacons in that band. I was wondering if there was a list of these beacons for the eastern half of the U.S.? If so where can I find it? On the Web? A publication? Does Joerg Klingenfuss's 2000 *Guide to Utility Stations* book have these listings? Will you please point me and other readers of the same interest in the right direction? Thank you for your help.

Sincerely,

Will Shel Drake
N1VEV

Thanks Will, for your letter. The Klingenfuss Guide does not cover beacons to a great degree because of the large number of them. However, the Longwave Club of America has a great web page where you can look up this information. You can find them at <http://www.anarc.org/lwca/>.

They also have links to individual pages that have searchable databases with this information. You can get a membership in

the club for \$18 a year in the United States, \$20 a year in Canada and Mexico, and \$26 a year for overseas members. These rates include a copy of *The LOWDOWN*, the LWCA's monthly bulletin which is mailed by first class mail in the United States and by A/O airmail elsewhere. All remittances must be in U.S. funds. Please send all checks and money orders to The Longwave Club of America, 45 Wildflower Road, Levittown, PA 19057.

Next we have a short note from one of the log contributors for this month.

Dear Joe,

This is my second set of loggings. The first set was published in May. I have a RadioShack DX394 with about a 60-foot wire antenna in the backyard. Some of the loggings you get are incredible! Think I may upgrade my receiver to scan some of the more popular channels because I think I miss a lot by manual tuning.

Thanks,

Dan Gillespie

Well done, and I hope you take a look at the computer-assisted material that I am going to be outlining. You are stating what many others are feeling when you say that you are missing out by manual tuning. I truly believe that your log rate will increase considerably by using the new computer-based methods of monitoring.

And I also received this E-mail from Dick Dillman, who was featured last month in the article on the historic commercial CW station KPH. Even though the event is old I am including it to show you what you can receive by E-mail from the Marine Radio Historic Society about their events at KPH.

Dear List member,

Ex-RCA coast station KPH will attempt to contact the Liberty ship SS Jeremiah O'Brien/KXCH on Sunday, 20 May. The O'Brien will be cruising in San Francisco Bay at the time. I apologize for the short notice, but we have just received word that a qualified commercial operator (Rod Deakin of Globe Wireless) will be aboard to activate the vintage Radiomarine console on the ship.

Primary activity will take place on MF. As is standard procedure in the maritime service the initial contact will take place on 500kc, then shift to 426kc (KPH) and 425kc (KXCH). KPH will be using about 3kW on these frequencies, KXCH about 200W. Since this operation will take place in daylight the range of the signals is likely to be limited. However KPH may also use 6477.5kc which should be heard over a greater distance. The 6Mc calling and working frequencies of the O'Brien have yet to be determined.

Commemorative messages and possibly a traffic list will be broadcast by KPH so there will be opportunities to copy the station at times other than the contact with KXCH. The exact times of operation have not yet been decided but KPH will probably be on the air beginning at about 1030PDT (1730GMT) and possibly continuing through about 1500PDT (2200GMT). If you'd like to hear KPH, the "wireless giant of the Pacific," on the air once again please tune-in. Please also see our Web site (www.radiomarine.org) for further information about KPH.

Vy 73,

Dick Dillman/"RD"

Reader's Logs

This month we have the assistance of over 10 people on the

logs. I am very pleased by the result. Take your time going over the comments contained in the logs. There is an excellent balance of marine, air, and land services here, and I must thank everyone for their great assistance in making this happen.

000: STATION, Anytown, USA, summary of traffic heard in MODE at TIME, Z (UTC), and personal comments here (JC)

206: GLS, Galveston, TX (CS-TX)
233: PK, Dallas/Ft. Worth, TX (CS-TX)
257: DT, Denton, TX (CS-TX)
316: MII, Caddo Mills, TX (CS-TX)
330: GLE, Gainesville, TX (CS-TX)
341: DNI, Sherman/Denison, TX (CS-TX)
350: RG, Oklahoma City, OK (CS-TX)
359: DUA, Durant, OK (CS-TX)
365: FT, Ft. Worth, TX (CS-TX)
2500: WWV time station on AM at 0658 Z (LH)
2516.0: RBDB, RN PLYMOUTH? RTTY//75/N/850 Marker every 70-75 seconds, no idle state between "zczqyn299 00 rbdhcs de rbdh 0000 1352225 znr uuuu channel check nnnn". No app tfc overnight. (DW)
2789.0: FUE, FN BREST RTTY//75/N/850 Marker "oo FAAA de RFFKE znr uuuu zui testing ry's sg's nnnn." (DW)
2813.3: MTI, RN PLYMOUTH VFT//3 chan fleet broadcast VFT on USB. Ch.2 idle on space. (DW)
2813.9: MTI, RN PLYMOUTH RTTY//75/R/200 Chan.1 in VFT. CARB "02 02a MTI" (DW)
2829.5: SPB28, SZCZECIN RADIO SITOR/A//100/E/170 End of qso "type or quit please." 2047z revert to chan free marker "de SPB." (DW)
3330: Chu Canada time station on AM at 0247Z (LH)
3390.0: MGJ, RN FASLANE RTTY//75/N/850 CARB "02 04 MGJ." (DW)
4035: Numbers station YL in Spanish interfering with mars net at 0231Z. (LH)
4146: Marine simplex-one boat off Cape Hatteras and one off Philadelphia passing WX and sea conditions on SSB at 1128Z. (LH)
4259.0: SAB, GW NODE GOETEBORG CW Channel free marker (Globe) "SAB" then tfc in Globedata. (DW)
4441.5: UNID Mars Net on 4441.50 on LSB at 2327Z. (LH)
4724.0: GHFS Andrews with 28-character message broadcast in USB at 0328Z. (CR)
4724.0: GHFS Hickam with message of 42 characters in USB at 0352Z. (CR)
5320: SUN1, prob USCGC Sundew (WLB-404) 0309 MIL-STD 188-141A/USB w/sounding call. Repeatedly sounded throughout the night. (MADX)
5321: UNID Marine. Fishermen give me a call after you get your coffee I'll go get one myself on SSB at 0303Z. (LH)
5417.10: Numbers Station YL in Spanish 0235Z. (LH)
5574.0: N498A (FALCON 900 EX) reporting flight level 380 and request for SELCAL check via San Francisco Radio in USB at 0402Z. (CR)
5574.0: USCG CAMSLANT working CG 2128 (HU-25A originating from CGAS Miami) and is advised RTB due to malfunction and requesting CAMSLANT to contact Miami and have another aircraft available and ready for their use upon arrival in USB at 0340Z. (CR)
5690: Camslant/Rescue 1717 giving flight out and position on SSB 2002Z (LH)
5696.0: Coast Guard 1602 (HC-130H) advising they are on-deck Sacramento and request CAMSPAC Pt. Reyes secure guard in USB at 2207Z. (CR)
5696.0: USCG CAMSLANT Chesapeake working CG 1719 (HC-130H7) for on-scene and off-scene times in USB at 0434Z. (CR)
5696: Camslant and 1603, 1603 reporting that they are in the process of dropping flares on 5696 at 0143Z. (LH)
5717: Rescue 109/Halifax military on SSB at 0244 Z. (LH)
5717: Halifax Military caught just Halifax id at 2218Z. (LH)
6316: LSD 836, Buenos Aires R. SITOR-A at 0030Z. (DT)

6322: ZSC, Capetown R. SITOR-A at 0035Z. (DT)
6326.5: USU, Mariupol R. Ukraine SITOR-A at 0036Z. (DT)
6379: 4XZ IN, Haifa Israel channel marker at 0041Z. (DT)
6456: ZLA, GW Awanui NZL 0940Z CW ID and ARQ tuning. (ML)
6458.5: NAR, Key West AFRTS Feeder 0425Z USB w/Paul Harvey "the rest of the story" broadcast. (MADX)
6467: LFI, Rogaland R. Norway SITOR-A at 0047Z. (DT)
6482: CLA, Habana R. Cuba CW at 0050Z. (DT)
6496.5: CFH, CANFORCES Halifax 0431Z BAUDOT 75/830 w/WX tfc. (MADX)
6532.0: Japan Air 3424 with position report to Tokyo Radio and is advised that new primary is 8.903.0 in USB at 0315Z. (CR)
6622: U.S. AIR 334, 0440 USB w/kg GANDER. Next position is 51N 020W. (MADX)
6655.0: Air Canada 898 with position report and SELCAL check (CQLS) via San Francisco Radio in USB at 1228Z. (CR)
6694: Halifax Military Canada telling UNID I have no traffic for you at this time at 1128Z. (LH)
6712: Lajes, 0300Z USB w/maintenance test.. (RP)
6739.0: GHFS Andrews with EAM broadcast in USB at 1252Z. (CR)
6761.0: GASSER 25 calling GASSER 24 with no response in USB at 0324Z. (CR)
6833.5: UNID MARS net 2314Z. (LH)
6836.7: N4NLH: Baumholder, Germany 10.03 Packet Exercise CE2001.Lithianian net control station working A9CFR (France?), B5CEI (Eire?), C5CNC (USA??), and D5CUK (Ukraine or UK??), and allowing them access to mailbox GW (PT)
6844: FDC, French Air Force Metz 0434Z CW w/call tape. (MADX)
6911.5: DUST, National Guard/U.S. Army 0436Z MIL-STD 188-141A/USB w/sounding call. (MADX)
7508.0: ZSJ, Cape Naval Radio 0915Z RTTY 75/170 RY/ID/CQ/Foxes file://18538.0 and 13538.0. (RH2)
7740.0: DEPM, MOROCCAN MOI? LOC MIL.STD 188-141A on LSB. Sounding. (DW)
7740.0: DG, MOROCCAN MOI? LOC MIL.STD 188-141A on LSB. Sounding. (DW)
7740.0: DEPT, MOROCCAN MOI? LOC MIL.STD 188-141A on LSB. Sounding. (DW)
7763.5: D6Z, ASECNA Moroni 1720Z ARQ-E3 48/400 "FFY ZCZC NTC 116 07172" then long idle. (RH2)
7763.5: D6Z, ASECNA Moroni 1624Z ARQ-E3 48/400 AERO data for FMCH/FMEE. (RH2)
7763.5: MR, MN Johore Bahru 1655Z RTTY 50/850 5LG to unk (RH2)
8187.7: 9MR, MN Johore Bahru 1644Z RTTY 50/850 5LG. (RH2)
8240: Echo Delta 9 calling NMN no joy on SSB at 2150Z. (LH)
8330: 3RFV1, FF LE PORT ARQ/E3//100/E/400 8RC. Betas. 1847z cct [VII] Cle de V svc "RFHI de RFHI" to Noumea. (DW)
8397: UDQR: M/V Vostok Orion 1205Z ARQ tfc and UDQR s/off to unknown. (ML)
8418: IAR, Rome R. Italy SITOR-A at 0053Z. (DT)
8419.5: PPR, Rio de Janeiro R. Brazil SITOR-A at 0054Z. (DT)
8420.5: CBV, Valparaiso R. Chile SITOR-A at 0055Z. (DT)
8424: SVU, Athens R. Greece SITOR-A at 0100Z. (DT)
8427: NMN In CW @ 0050. (DG)
8431: TAH, Istanbul R. Turkey SITOR-A at 0105Z (DT)
8434.5: SAB, GW NODE GOETEBORG CW Channel free marker (Globe) "SAB." (DW)
8450: SAB, Benghazi R. Libya calling CQ at 0108Z. (DT)
8457.5: 9MR: RMN Johor Baharu MLA 1133Z RTTY 50/850 w/ID tape and msg for RMNS Perantau (survey ship) // 8188. (ML)
8461: PKD: Surabaya rdo INS 0730Z CW WX for Indonesian waters EE. (ML)
8500: VTH.: Indian Navy Mumbai 1237Z RTTY 50/850 tfc list and id tape. (ML)
8542: PKX: Jakarta rdo 1100Z CW wngs and WX for Indonesian waters EE. (ML)
8602: CWA, Cerrito R. Uruguay calling CQ at 0122Z. (DT)
8631.0: ZSO: SA Navy Durban 1025 MFSK/32 54.5bd Long sigs! 6407.7 - much weaker sigs! (RH2)

8686: PKD: Surabaya rdo INS 0700Z CW w/tfc list and CQ DE PKD mkr. (ML)

8686: PKR: Semarang rdo INS 0903Z CW w/CQ CQ DE PKR PKR QSX CH 3/9 QRU? K mkr. (ML)

8707: UNID 2 OM in USB, UNID language @ 0059 to 0101. (DG)

8800: OM/YL in open carrier USB conversation @ 105. Sounded like p/p. Could not understand language so did not pick up ID. Out @ 0106. (DG)

8843.0: N502KA (Gulfstream V) with position report to San Francisco Radio in USB at 2055Z. (CR)

8843.0: N701WH (BD-700-1A10) with altitude (430) and position report to San Francisco Radio and is advised that secondary will be 13.354.0 in USB at 2056Z. (CR)

8843.0: N344BA (Canadair CL-600-2B16) with position report and SELCAL check via San Francisco Radio in USB at 2205Z. (CR)

8843.0: Coast Guard 1601 (HC-130H enroute McClellan) with position report via San Francisco Radio in USB at 0241Z. (CR)

8906: NY and Santa Maria wkg various a/c in USB 0108. (DG)

8912.0: UNID. AIRCRAFT FLIGHT UP6149 HFDL//on USB. Psn 22.27N 77.59W, 0808z 23.03N 78.11W, 0818z 24.07N 79.01W, 0825z 24.51N 79.33W, 0830z 25.19N 79.58W. (DW)

8912.0: ARINC. NEW YORK HFDL// on USB. SPDU's. Logon confirms to - 1728z to ICAO 17070146 as Air ID 194, 0729z to ICAO 51513534 as Air ID 195, 0839z to ICAO 33271203 as Air ID 197. (DW)

8942.0: ARINC. SHANNON HFDL// on USB. SPDU's. (DW)

8951.0: Air Canada 3008 with position report and SELCAL check (ABEW) via Tokyo Radio in USB at 1339Z. (CR)

8957: UNID a/c WX report in USB @ 0115. Buried in noise. ? WX for Lisbon, Madrid. (DG)

8977.0: UNID. AIRCRAFT FLIGHT LH8189 HFDL// on USB. Posn 50.17N 8.12E (DW)

8977.0: UNID. AIRCRAFT FLIGHT LH8424 HFDL// on USB. Posn 46.01N 20.54E (DW)

8977.0: ARINC. REYKJAVICK HFDL// on USB. SPDU's (DW)

8983: CAMSLANT CHESAPEAKE WITH A/C "2135" AT 0019UTC REF ABORT CURRENT MISSION AND PROCEED NORTH FOR POSSIBLE GO FAST. WHT IN COLOR CIGARETTE BOAT. GROUP KEY WEST WAS WHO ORDERED MISSION ABORT. STATION ISLA MARADA HAS VESSEL ON RADAR (CS-TX)

8983.0: USCG CAMSLANT Chesapeake requesting ops report from RESCUE 6012 (HH-60J) in USB at 0503Z. (CR)

8983.0: USCG CAMSLANT Chesapeake calling A5Q with no response in USB at 0334Z. Also heard call on 5.696.0 at 0337Z. (CR)

8983: San Juan asking UNID where did you get this information 0230Z (LH)

8992.0: KING 02 (C-130) with p/p via GHFS McClellan to McChord Metro for 0500Z arrival WX at Portland then p/p attempt to ACCLIMATE with no answer in USB at 0407Z. (CR)

8992.0: GHFS McClellan with 22 character EAM broadcast in USB at 0249Z. (CR)

8992: UNID. ANDREWS 0542Z USB w/30-character EAM (AKP-WSP...) Echoed at 0545Z by at least one station. (MADX)

9016.0: GHFS Hickam with 28 character EAM broadcast in USB at 0320Z. (CR)

9041.0: YE. NAIROBI MET RTTY//100/N/850 Met t/c. (DW)

9057.0: GHFS Offut with ALE initiated voice radio check with GHFS McClellan in USB at 0300Z. (CR)

9071.1: UNID. 2010Z ITA2 75/818 Sends BPXL repeatedly then into encryption after vvvvv..... (PT)

9130.0: MGJ. RN FASLANE RTTY//75/N/340 CARB. (DW)

9150.2: TASHKENT MET RAX//90/576/N/800 Weak, noisy chart. (DW)

9157.0: HEC. GW NODE BERN CW Chan free marker (Globe) "HEC." (DW)

9164.9: HLL. SEOUL MET FAX//120/576/N/800 Poor sat pix. (DW)

9238.2: FJY2: French base Port aux Francais KER 1020Z ARQ-E3 200/400 relaying t/c ex TAAF Paris to FJY4 Martin De Vivies AMS. (ML)

10100.8: DDK9, Hamburg Meteo 0134Z BAUDOT 50/790 w/WX t/c. (MADX)

10170.0: MGJ, RN FASLANE RTTY//75/N/2550 CARB "02 04 MGJ" Third harmonic of 3390. (DW)

10192.5: DHJ-59 (German Navy, Wilhelmshaven): 0015 USB w/DRET (FGS ROTTWEIL MINE HUNTER M-1061) in voice and RTTY traffic. (RP)

10215.0: HZN48, JEDDAH MET RTTY//100/R/850 200Hz high. Rough notes. Met t/c. (DW)

10238.5: UNID. prob HEC: Globe Wireless Berne 0522Z PACTOR-variant 100/200 two stations wkg here. One w/strong signal (locally) and one unreadable. (MADX)

10261.5: GXQ, London, England 1000Z Piccolo 6 Calling UNID station. (PT)

10288.0: UNID. 1530Z ITA2 100/170 Pages of RY's then ZUL and shuts down. (PT)

10341.0: HEC, GW NODE BERN CW Chan free marker (Globe) "HEC." (DW)

10360.0: SAB, GW NODE GOETEBORG CW Channel free marker (Globe) "SAB." (DW)

10361.5: SAB, GW NODE GOETEBORG CW Channel free marker (Globe) "SAB." (DW)

11105.0: 116, CHINESE DIPLO (?) LOC MIL.STD 188-141A ALE on USB. Cng 191 then t/c in Mil.std 188-110A. 1908 ALE cng 123. 1946z ALE cng/wkng 198 then into t/c (Mil.std 188-110A). (DW)

10374.7: RPTMB. PN Porto Santo 1641Z RTTY 75/850 Crypto (RH2)

10374.7: RPTMB. PN Porto Santo 1641Z RTTY 75/850 Crypto (RH2)

10586.5: SHARES station requesting that unheard station relay traffic to AFA3HY in USB at 1834Z. (CR)

10608: CG Group Miami: 2226Z USB w/UNID identified CG asset testing both clear and ANDVT voice. (RP)

11105.0: UNID, CHINESE DIPLO (?) LOC MIL.STD 188-141A ALE on USB. Wkng 116 then Mil.std 188-110A. (DW)

11105.0: YT362A, CHINESE DIPLO (?) LOC MIL.STD 188-141A ALE on USB. Calling ZT201A. (DW)

11122: UNID. USAF AWS 1020Z FAX 120/576 w/apparently encrypted chart. Strong signals, but no readable image. (MADX)

11149.0: GYU. RN GIBRALTAR RTTY//75/N/850 Marker "de GYU test test test ry's test test test. . .kilo." (DW)

11175.0: REACH6956 (C-141, tail #67956) with p/p via GHFS Andrews to Dover CP and Dover METRO and supplied piprep with position as 44.50N, 94.27W, est. blocks at 0540Z in USB at 0319Z. (CR)

11175.0: GE 177 passing three-figure phonetic groups to GHFS Hickam for relay to unknown station and Hickam responds with a TOR (time of receipt) and confirmation in USB at 1354Z. (CR)

11175.0: GE 177 passing three-figure groups to GHFS Elmendorf with request for relay and TOR. Hickam responds with TOR as 1630, initials DD in USB at 1625Z. (CR)

11175.0: THUNDERBIRD 14 with p/p attempt via GHFS Andrews to McChord CP and metro but unable to complete due to poor propagation and Andrews requests switch to 8.992.0 with nothing further heard in USB at 0429Z. Believe this may be a forward unit of the USAF Thunderbirds doing prep for upcoming open house at McChord. (CR)

11175.0: COUNT 46 (KC-135) with p/p via GHFS Andrews to Dyess Wing CP requesting to pass message to DARK 25 (B-1B, 7th Bomb Wing) that they are holding at northwest corner of AR-623 due to severe WX in the track in USB at 0231Z. (CR)

11175.0: W27 with p/p via GHFS Andrews to LOGGER CONTROL advising that W27 and W28 are code 1 in USB at 0439Z. (CR)

11175.0: BRONCO 95 with HF radio check via GHFS Puerto Rico in USB at 0107Z. (CR)

11175.0: NAVY WV970 (VR-53 "Capital Express" C-130T) with p/p via GHFS Puerto Rico to Andrews Metro for 0200Z arrival WX in USB at 0108Z. (CR)

11175.0: HAWK 64 (B-1B) with p/p via GHFS Puerto Rico to RAY-

MOND 37 (Dyess) but DSN is out of service and p/p effort is terminated in USB at 0333Z. (CR)

11175.0: GHFS Puerto Rico advising SPAR 65 to meet operator on freq. 461 (13.211.0) with no contact, then SPAR flight is directed to meet operator on freq. 498 (8.032.0) where they finally meet Andrews in USB at 0342Z. (CR)

11175.0: REACH 401 with p/p via GHFS Puerto Rico to Naval Station Rota (Spain) for arrival WX in USB at 0110Z. (CR)

11175.0: SHARK 65 calling MAINSAIL with no response in USB at 0138Z. (CR)

11175: Puerto Rico with pp for UNID aircraft to HILDA East and HILDA metro at 0130z. Info exchanged on HAZMAT cargo, WX, and secure takeoff from airport in a "Gulf" country. Aircraft not heard at this QTH. (DS2)

11181.0: AEGIS 40 (C-130H, 40th ALS, Dyess) passing tactical traffic regarding their third pass over target to STRIKESTAR, then advises that they will be turning short due thunderstorms at point Bravo in USB at 0346Z. (CR)

11181.0: STRIKESTAR directing RAMROD 20 to target moving on highway 257 and out of Sanford followed by a series of tracking directions to guide RAMROD 20 to target in USB at 0450Z. (CR)

11181.0: GHFS Andrews with message of 42 characters and simulcast on 11.244.0 in USB at 0348Z. (CR)

11202: CAMSPAC Pt. Reyes working vessel *PIRIHA* (?) in regards to medical emergency on board at 1220z. Operator on vessel wanted to review a medical procedure with a doctor in case she needed to perform it on the individual with the problem. CAMSPAC indicated they would get a doctor and call the vessel back. (DS2 WI)

11208.0: RIFF, Italian Army 0912Z ITA2 100/85 RY's tape with PROVA DI COLLEGAMENTO. Goes off air and returns 1kHz higher with 170Hz shift. This time ends LEONE DA VAGA KKK. Then reverts to this frequency with 170 Hz shift before closing down (PT) 11220: Andrews. 0213Z USB w/Main Road (strong level) in radio checks. Switches to F965 (11466). (RP)

11232.0: CANFOR 3638 with request for WX, SELCAL check (ASCR) and score for the Toronto/NJ hockey game via Trenton in USB at 0105Z. (CR)

11244.0: GHFS Puerto Rico with 28-character message broadcast in USB at 0120Z. (CR)

11244.0: GHFS Andrews with 28 character EAM broadcast in USB at 0322Z. (CR)

11247: Ascot 3211 (RAF Tristar, 216 Sqdn RAF Brize Norton): 0045 USB w/Haven (Ascension Island) who passes WX for Ascension; Dakar; Tenerife; Lisbon; Porto Santo, Portugal; and RAF Brize Norton. (RP)

11253.0: very weak AERO WX broadcast in USB at 0454Z. May be RAF London (MPL2). (CR)

11253: RAF VOLMET, 0452Z USB w/YL/EE w/aviation WX. (MADX)

11253: S72, Swedish Embassy Kinshasa 0455Z MIL-STD 188-141A/USB w/sounding call. (MADX)

11253: RAF West Drayton: 0217Z USB w/VOLMET. (RP)

11282.0: NAVY YD339 (P-3, VP4?) with position report to San Francisco Radio in USB at 0259Z. (CR)

11282.0: GUCCI 45 (flight of two KC-10s, 722 ARW, March ARB) advising San Francisco Radio they are conducting AR in the block and estimating exit at 0349Z in USB at 0301Z. (CR)

11282.0: REACH 6171 with position report to San Francisco Radio and is advised to contact Honolulu Center on 127.600 in USB at 0302Z. (CR)

11282.0: REACH 6133 with position report to San Francisco Radio in USB at 0406Z. (CR)

11282.0: CHILL 11 (B-52) advises San Francisco Radio that they are five minutes from exiting workspace and would like flight level 310 to 330 and direct to W-093 area in USB at 0129Z. (CR)

11282.0: ICER 21 advising San Francisco Radio that they will exit workspace at 0208Z and would like clearance to W-093 then same flight plan as CHILL 11 in USB at 0200Z. (CR)

11282.0: KING 01 (C-130) cleared to flight level 190 from 180 via San Francisco Radio in USB at 2047Z. (CR)

11282.0: RULER 14 (C-141, 172nd ANG) cleared to flight level 400 from 380 via San Francisco Radio in USB at 0220Z. (CR)

11282.0: JAZZ 88 with position and altitude report to San Francisco Radio in USB at 0227Z. (CR)

11327.9: OZU25, MFA COPENHAGEN TWINPLEX//100/E/-400/-200/200/400 F7b-1 Tfc in offline encrypt then betas, finally offair 0946z. (DW)

11396.0: Qantas 10 with position report to Jakarta Radio and is advised to contact Brisbane next in USB at 1346Z. (CR)

11396.0: Qantas 6 with position report and SELCAL check (DLBH) via Jakarta Radio in USB at 1232Z. (CR)

11466: Andrews, 0215Z USB w/Main Road (weak level) in radio checks then gone. (RP)

11581.0: Woman in English (E17) broadcasting five-figure groups repeated twice in AM at 0409. Signal strength was a very strong S9+. (CR)

12478.0: UCNJ, SHIP *IGOR GRABAR* SITOR/A//100/E/170 Obs to Arkhangelsk. Psn 39.36N 9.54W (Off Portugal) cse Sth spd 6-10kts. (DW)

12489: UISG: M/V Refrijerator-605 2236Z ARQ w/UISG log on and msg to Vladivostok. (ML)

12491: UEUL: M/V *Fedor Bredikhin* 1107Z ARQ selcal KYXF and 54965 UEUL log on to Kholmok, no tfc. (ML)

12570: UCXY: SRTM Bilene 0948Z ARQ tfc to Vladivostok and UCXY s/off. (ML)

12570: UIXE: RTM Pirit 1101Z ARQ crew msg to unkwn. (ML)

12570: UIXK: RTMA Klimovo 1001Z ARQ QTH msg and UIXK log off to unkwn. (ML)

12610.5: VCT, Tors Cove R. NF Canada SITOR-A at 0142Z. (DT)

12611.5: KEJ, Hoolehua R. HI SITOR-A at 0143Z. (DT)

12615.5: 8PO, Bridgetown R. Barbados SITOR-A at 0147Z. (DT)

12730.5: NMC, USCG San Francisco FAX 120/576 Clear WX chart. (RH2)

12745.5: JJC, KYODO TOKYO FAX//60/576/N/800 News sheet in Japanese characters. (DW)

12746.7: JJC, Tokyo R 0755 FAX 60/576 JJ Nx\paper Clear. (RH2)

12815.0: LYL, KLAIPEDA RADIO CW Tfc list and stn info. QSW a la 17138/12815/3730 QSX 22270.5/16672.5/6292.5/2516 kHz LYL stop qsw/qsx J3e 17320/16438 12362/12323 3215/4128 kHz. (DW)

12818.0: SAB, GW NODE GOETEBORG CW Channel free marker (Globe) "SAB." (DW)

12851.0: SAB, GW NODE GOETEBORG, GLOBEDATA Tfc with ship then channel free marker (Globe) "SAB." (DW)

12907.5: PKB: Belawan rdo INS 0625Z CW w/CQ DE PKB QRU? K mkr. (ML)

13147.4: ZLA: GW Awanui NZL 1020Z CW id and ARQ tuning. (ML)

13215.0: GHFS Andrews with ALE initiated HF radio check via GHFS Puerto Rico followed by Puerto Rico in ALE and voice for radio check and ends with Puerto Rico asking Andrews to standby for data in USB at 0309Z. (CR)

13257: Trenton Military, 2050Z USB w/Canforce 2705Z (not heard) in radio check. (RP)

13261.0: New Zealand 10 with position report to San Francisco Radio in USB at 0447Z. (CR)

13276.0: ARINC, NEW YORK HFDL// on USB. Log-on confirm to ICAO 51306455 as Air ID 153. SPDUs. 1900z ACARS on demand msg to N466UP (ID153). (DW)

13282.0: Auckland Radio (ZKAK) VOLMET with aviation WX broadcast in USB at 0453Z. (CR)

13282.0: Honolulu Radio (KVM70) VOLMET with aviation WX broadcast in USB at 0455Z. (CR)

13282.0: Honolulu Radio (KVM70) with VOLMET AERO WX broadcast in USB at 0226Z. (CR)

13300: San Francisco Radio requesting altitude and position verification (14N, 175W) due to confusion at Oakland ARTCC in USB at 0441Z. (CR)

13309.0: Air Force 570 with req. for f/I 310 via Hong Kong Radio in USB at 1330Z. (CR)
13315.0: UNID, Springbok 207 0950Z USB Posn Rpt to SAA JNB (RH2)
13354.0: San Francisco Radio with SELCAL to N4AS (B-737-74U) to confirm speed per ATC request and N4AS is cleared to mach .80 in USB at 2049Z. (CR)
13354.0: N14NA (MYSTERE FALCON 900) with position report to San Francisco Radio and is advised to contact San Francisco on 8.843.0 in USB at 2049Z. (CR)
13354.0: N621JA (Gulfstream IV) with position report to San Francisco Radio and is advised to switch to 8.843.0 in USB at 2055Z. (CR)
13354.0: N100ES (Gulfstream IV) is advised that ATC clears N100ES to flight level 450 via San Francisco Radio in USB at 2136Z. (CR)
13354.0: N473CW (Gulfstream IV) advising San Francisco Radio of position several times due to poor propagation in USB at 2212Z. (CR)
13354.0: N737BZ (737-73Q) advised by San Francisco to climb to flight level 390 in USB at 0133Z. (CR)
13354.0: United 36 with position report to San Francisco radio and is directed to make next report on 5.547.0 in USB at 0222Z. (CR)
13354.0: REACH 7083 with position report to San Francisco radio and is asked to switch to 11.282.0 in USB at 0119Z. (CR)
13572.5: UNID, prob RFFX: French MOD Versailles 0141 ARQ-E 184.6/400, signal fading in and out. (MADX)
13882.5: DDK6. Hamburg Meteo 1042Z FAX 120/576 w/48hr wave prediction chart. Moderate QRN, but readable. (MADX)
13901.2: UNID, FF ARQ/3423//20/E/400 4rc. 2 chan tdm. Chan A: and B: Betas but poor sync thru 1615z. (DW)
13917.0: SNN299, Warsaw, Poland 1445Z Pol-ARQ 100/170 CLARIS message in PP to Tripoli. (PT)
13920: AXM35. Canberra Meteo 0908Z FAX 120/576 w/audible signal, but too weak to get good read on chart. (MADX)
13956.5: PG3(?), MFA Tunis? 1540 fec "qru qru bc bc ar ar" and off! (RH2)
13977.7: UNID, FFPARIS ARQ/342//200/E/400 4rc. 2 chan tdm. Poor sig, little sync. Chan A: B: betas, no app tfc thru 1910z. (DW)
14373.0: MNRV: SANT Monrovia 1725 Pactor 200/200 Tfc/SS to unk. (RH2)
14396: LN2A, NTA Beacon Sveio 1029Z CW w/id and data pulses. (MADX)
14396.5: SHARES exercise conducted by KHA908 as net control and requesting check-ins in USB at 1730Z. Other stations include WWJ98, KGD34, AAR9LK, DLA303, KHA925, WPEH728, AFA3HY and AAR9DL. They were having a real challenge with poor propagation. (CR)
14403: UNID. 0336Z UNID 75/250 encrypted? (MADX)
14440: UNID, 0458Z USB w/whistling and bird calls along with short calls (similar to test, test) in an UNID language. (MADX)
14467.3: DDH8, Hamburg Meteo 2203 BAUDOT 50/394 w/call tape. (MADX)
14481.7: RFTJ, French Forces Dakar 1004Z ARQ-E3 48/390 w/plain-text FF tfc on ckt [TJF]. (MADX)
14487.7: RFFAB, Paris, France 0815Z ARQ-E3 200/400 5-lg tfc to RFFVAEA, Dahrhan, on FDX cct (PT)
14590.5: UNID, 0959Z PICCOLO-12. (MADX)
14672: UNID. 1027Z CW w/36wpm, apparent 5FGs. I can't copy that fast, and my decoder couldn't either. (MADX)
14718.3: RFH1, French Forces Noumea 0950Z ARQ-E3 100/400 w/plaintext FF tfc on ckt. (MADX)
14731.7: RFFHC, Comleget Aubnert 1530Z ARQ-E3 192/400 Admin Msg/FF to ooo's of "ZEN Regleget" callsigns! know meaning of "Regleget" Legal? (RH2)
14812.0: BRA, MFA BRATISLAVA? MIL.STD 188-141A on USB. Sounding (DW)
14812.0: KAH, SLOVAKIAN EMB CAIRO? MIL.STD 188-141A on USB. Sounding (DW)
15016.0: GHFS Hickam with 22 character message broadcast in USB at 0436Z. (CR)
15016.0: GHFS Andrews with 22 character EAM broadcast in USB at 0355Z. (CR)
15016.0: GHFS Thule with a 20 character EAM in USB at 0144Z. (CR)
15025.0: UNID, AIRCRAFT FLIGHT LH8183 HFDDL// Psn 49.21N 37.28W Perf. Data. 1609z psn 49.29N 36.25W. 1614z psn 49.36N 35.23W. (DW)
15025.0: UNID, AIRCRAFT FLIGHT LH8189 HFDDL// Psn 57.07N 36.02W Perf. Data. 16z psn 57.07N 33.38W. (DW)
15025.0: UNID, AIRCRAFT FLIGHT LH8273 HFDDL// Psn 33.49N 7.54W Performance data. 1608z psn 34.22N 7.29W. 1613z psn 34.54N 7.04W (DW)
15025.0: UNID, AIRCRAFT FLIGHT LH8419 HFDDL// Psn 44.41N 28.16W Perf. Data. 1617z 45.11N 26.35W. (DW)
15025.0: UNID, AIRCRAFT FLIGHT LH8420 HFDDL// Downlink ACARS. Q0 link test. Air ID030, reg nr D-ALCG. (DW)
15025.0: UNID, ARINC REYKJAVICK HFDDL// SPDUs. 1606 Log-on confirm to ICAO 51676021 as Air ID 29. 1631 Log-on confirm to ICAO 17070147 as Air ID 30. (DW)
15794.0: UNID: UK mil Cyprus 1732 MFSK 195.3/300 Crypto (RH2)
15873: P6Z, MFA Paris 1052Z FEC-A 192/360 w/5LGs and several non-protége msgs to UNID station in Europe. Ref's to flight plans and passport, refueling of a/c CFI requested. (MADX)
16000: VNG. Australian Time Station 0507Z AM w/time pip (MADX)
16087.7: RFVI, French Forces Le Port 1117Z ARQ-E3 100/400 w/several 5LG msgs on ckt [REI]. (MADX)
16112.0: UNID, CIS Navy 1750Z 36-50 50/300. (RH2)
16112.0: UNID, CIS Navy 1750Z 36-50 50/300. (RH2)
16127: DHJ-58 (German Navy, *Glucksburg*): 2325 USB w/DRKH (*FGS MEERSBURG* AUXILIARY SHIP A-1418) in voice and RTTY. (RP)
16141.7: MFA Cairo 1635Z ARQ Msg\AA to kwfk. (Accra) (RH2)
16141.7: kdakrfr, MFA Cairo 1635Z ARQ Three Msgs\AA to kwfk (Accra Emb). (RH2)
16180: UNID: 0509Z 81-81 40.5/500. (MADX)
16188.5: UNID, UK FCO 0051 PICCOLO-12. (MADX)
16256.7: UNID, MFA Cairo 1545 ARQ Msg\AA to unk (RH2)
16278.8: Algiers, Algeria 1535Z Coquelet 8 SUPER FLASH message in FF to Amman embassy for Air Algerie rep in that city. (PT)
16285.0: Copenhagen, Denmark 0930Z Twinplex 100/400 5-lg tfc the selcal TPIV and 5-lg message headed TO PRETE 1539Z. (Pretoria??) (PT)
16310.2: RFFAB: Paris, France 1335Z ARQ-E3 200/400 GUERRE TERRE DIRPOSTE PARIS with tfc in FF to COMELEF ALYSSE via FDX cct. (PT)
16321.7: MFA, CAIRO SITOR/A//100/E/170 Short opchat in Arabic(ATU80) "03281" and offair. qsy? to 18230+1.7. (DW)
16412.7: UNID, BIAC Kinshasa 1505Z Pactor 200/200 Financial Msgs/FF to Lubumbashi. (RH2)
16544: RADGENA, Colombian Navy 0049Z MIL-STD 188-141A/USB + CLOVER2000 wkg TURBO: Colombian Coast Guard Base Turbo. At 0142z, PROVIDENCIA: Colombian Navy Survey Vessel Providencia (BO-155)clg UNID. (MADX)
16713: UCVS: TH Amur 0752Z ARQ svc msg to Vladivostok. (ML)
16713: UFML: TH *Kapitan Gnezdillov* 0743Z ARQ ship msgs to Vladivostok. (ML)
16718: UDDO: RS Pantanino 2350Z ARQ msgs and UDDO log off to Vladivostok. (ML)
16718: UDMO: BMRT Turkul 0847Z ARQ msg to unkwn. (ML)
16788: UHBD: *M/V Sormovskiy*-58 0748Z ARQ selcal PAQE sequence and msg to Khabarovsk. (ML)
16801: UNID, RTMS Korlas 0723Z RTTY 50/170 tfc to unkwn. (ML)
16801.5: UBSX, SHIP BRATXI STOANOWY 3SC//50/R/170 BATM. Tfc in 3sc. (DW)
16801.5: UDHL, SHIP *STARYI ARBAT* 3SC//50/R/170 BATM KLD WRF. tfc in 3sc via Kaliningrad. (DW)
16801.5: UAUJ: BATM Porfiri Tchanchibadze 0627Z RTTY 50/170 clg Kaliningrad w/UIW DE UAUJ to tfc, UAUJ s/off. (ML)

16801.5: UEOZ: RTMS Briz 0717Z RTTY 50/170 clg Kaliningrad w/UIW DE UEOZ to tfc. UEOZ s/off. (ML)

16812.5: NRV, USCG GUAM CW Channel free marker "NRV." (DW)

16833.5: UIW: Kaliningrad rdo 0708Z ARQ msg to 3FK W4 Ref Vega (24May01). (ML)

16851.5: SAB, GW NODE GOETEBORG CW Channel free marker (Globe) "SAB." (DW)

16932: TTF, Boufarik R. Algeria calling CQ at 2339Z. (DT)

16932: VCS, Halifax R. NF Canada SITOR-A at 2354Z. (DT)

17045.7: 9MG, Penang R 1655Z ARQ Marker. (RH2)

17045.7: MG, Penang R 1655Z RTTY 50/850 Marker. (RH2)

17175.2: A9M, Baharain Radio 2157 CW w/call tape. (MADX)

17362: WLO telephone service on SSB at 2341Z. (LH)

17414.0: P6Z: MFA Paris 1520 fec-a 192/400 Letter/sub Msg/FF to H6L (Algiers). (RH2)

17414.0: RFGW: MFA Paris 1537 fec-a 192/400 Msg/FF to RFFVCF/CFIR Paris, RFFVICF/Villacoublay, ZEN/Milfrance Cotonou and others re international overflights "Mission Speciale" from Paris to Cotonou. (RH2)

17551.8: RFTJQ, FN Dakar Area? 1639Z ARQ-E3 192/400 5LG to RFFXOC/RFGW/RFFABCT. (RH2)

17928.0: ARINC, HAT YAI HF DL//on USB. SPDUs. 1637z log-on confirm to aircraft ICAO 34336142 as Air ID 172. (DW)

17934.0: ARINC, HAWAII HF DL//on USB. SPDUs. (DW)

18003: HIK, Hickam AFB 0512Z MIL-STD 188-141A/USB w/sounding call. (MADX)

18040.0: UNID, PICC//VFT Two channel piccolo VFT on USB. (DW)

18040.4: UNID: Algiers, Algeria 0900Z Dup-ARQ 125/170 Tfc in HH headed "ALGIR." Switches frequency in middle of message. (PT)

18040.5: UNID, PICC//. (DW)

18040.5: Chan 1 (Eng) in VFT. On standby thru 1815z. (DW)

18040.9: UNID PICC//. (DW)

18040.9: Chan 2 in VFT. Online encrypted 6 tone piccolo. (DW)

18042: W3S: French Emb Islamabad 1002Z CW op msg to P6Z Paris QSX was 19635. (ML)

18046: W3S: French Emb Islamabad 1025Z FEC-A 192/850 clg P6Z Paris to 5LG msg. (ML)

18050: W3S: French Emb Islamabad 1020Z FEC-A 192/850 5LG msg. (ML)

18220: JMH5, Tokyo Meteo 1057 FAX 120/576 w/audible signal w/significant fading. (MADX)

18220.0: JMH5, Tokyo Meteo 1525 fax 120/576 Nice clean chart! (RH2)

18231.7: MFA, CAIRO SITOR/A//100/E/170 Selcals XB VY (London Emb), goes to irs then more selcals. 1011z offair. 1013 short Arabic opchat in fec. 1016 selcals XB VY. Advises 06680 (18661.7) and off air. (DW)

18235.9: ZSJ, SAN CAPETOWN FAX//120/576/N/800 Sfc analysis. Weak, hazy pix. (DW)

18320.7: RFFIC, Marine Sirpa Paris 1245Z Arq-E3 192/400 MCA Presse to AIG2135 and RFFXOC/Armees Centops Paris. (RH2)

18325.5: GYU, Gibraltar 1900Z Piccolo 6 Closing down op chat to GXQ, UK. (PT)

18661.7: MFA CAIRO SITOR/A//100/E/170 Op chat in Arabic (ATU80) advises 66091. (19067.7) (DW)

18789.0: UNID, UK Mil Cyprus? 1531 MFSK 195.2/320 4 lovely big spikes! // 13565.0. (much weaker) (RH2)

19026.7: UNID, EGYPTIAN DIPLO ? SITOR/A//100/E/170 Weak irs till 0928z when short Arabic(ATU80) opchat and off air. (DW)

19036.4: UNID, ALGERIAN EMB ACCRA COQ/8//26.7/-/- Superflash msg in FF. (DW)

19036.4: ALGERIAN EMB NDJAMENA COQ/8//26.7/-/- Tfc in offline encrypt, number of section rpts, and s/off. (DW)

19067.7: MFA CAIRO SITOR/A//100/E/170 Repeated "s.kghlb" then selcals XB VY (London). qso established and tfc in offline encrypt to London. S/off 1030z. (DW)

19101.7: RFLI, FF FORT DE FRANCE ARQ/E3//192/E/400 8rc. Betas. 1600z cct [BFL] C de V svc RFLI de RFLI, also at 1640z, 1740z. (DW)

19146.7: MFA CAIRO SITOR/A//100/E/170 Selcals TVQV (Riyadh). 1543z switches to fec, indicates qsx 33011(11034.7 khz). 1548z revert arq selcals TVQV till 1551z with no subsequent qso. (DW)

19146.7: MFA Cairo 0632Z ARQ selcal TVQV to Riyadh, 0635Z FEC w/JG KDFSPSR KDS KDFSKX IIOKDS 55281 (for QRX of 18256.7) nil heard) no tfc. (ML)

19204.7: RFVI FF LE PORT ARQ/E3//100/E/170 8rc betas. No app tfc thru 1745Z. (DW)

19692.5: ZSC, Capetown Radio 0930Z SITOR-B 100/170 w/coastal waters and high seas WX bulletins. (MADX)

19692.5: ZSC, Capetown R 0935Z FEC WX file://16816.0+12601.0+4214.0 kHz. (RH2)

19708.0: SAB GW NODE GOETEBORG GLOBEDATA Tfc with ship then channel free marker (Globe) "SAB." (DW)

20200.5: GXQ, London, England 1145Z Piccolo 6 Calling GYU, Gibraltar. (PT)

20633.7: RFVI, FN Le Port 0921 Arq-E3 100/400 CdeV then Admin Msg/FF to Comsup St Denis cc several RFVI callsigns. (RH2)

20698: S32, Swedish Embassy Kuwait City 0004Z MIL-STD 188-141A/USB w/sounding call. (MADX)

20698: S00, Swedish MFA Stockholm 1613Z MIL-STD 188-141A/USB wkg S53: Swedish Embassy Amman then into mod-MIL-STD 188-110A modem. (MADX)

20733.7: RFVINVS, FN Ship "Nivoise" 0792Z ARQ-E3 100/400 5LG to RFFAACT/Nantes cc RFGW/RFFIC on REI cid. (RH2)

20815: UNID, ICRC 1855 PACTOR-4 200/200 and 100/200 w/ASCII tfc. QRT at 1912Z w/no ID. (MADX)

21856.7: Egyptian Emb Kuala Lumpur (JG WLKDKDJYLF) 0810Z ARQ 5LG msg to unkwn. (ML)

21949.0: UNID, AIRCRAFT FLIGHT CO0093 HF DL//on USB. Psn 23.11S 45.04W. (DW)

21949.0: UNID, AIRCRAFT FLIGHT LH8273 HF DL//on USB. Psn 13.44N 18.12W. 1230z osn 14.11N 17.54W. 1240z psn 14.37N 17.27W. 1245z psn 14.38N 17.28W. (DW)

21949.0: UNID, AIRCRAFT FLIGHT SV 1229 HF DL//on USB. Psn 29.56N 41.17E. 1342z 30.31N 41.12E. (DW)

21949.0: UNID, AIRCRAFT ICAO 17070143 HF DL//on USB. Logon request to ARINC Johannesburg. (DW)

21949.0: UNID, AIRCRAFT ICAO 52230421 HF DL//on USB. Logon resume to Johannesburg. (DW)

21949.0: UNID, AIRCRAFT REG D-ALCD HF DL//on USB. Logon request (ICAO 17070144). 1404z ACARS demand mode (Air ID13). (DW)

21949.0: UNID, AIRCRAFT REG HZ-APY HF DL//on USB. ACARS demand mode. (DW)

21949.0: UNID, AIRCRAFT REG N466UP HF DL//on USB. Logon request fm ICAO 51306455. 1351 ACARS demand mode. (ID11), 1352z ACARS 47 usr/dfnd, psn 23.00S 47.09W. 1353z ACARS 40 usr/dfnd. 1357z ACARS 3K usr/dfnd, psn 23.00S 47.08W. (DW)

21949.0: UNID, AIRCRAFT REG N69154 HF DL//on USB. ACARS demand mode. (DW)

21949.0: ARINC, JOHANNESBURG HF DL//on USB. SPDUs. 1221 logon confirm to ICAO17070143 as Air ID 7. 1243 logon confirm to ICAO3400341 as ID8. 1350 logon confirm to 51306455 as ID11. 1403 logon confirm to 17070144 as ID13. (DW)

22220.5: UNID, 1836Z SITOR-A 100/170 w/sc: XVSM Globe Wireless. (MADX)

22371.0: UNID, SHIP NAVIGATOR 3SC//50/R/170 BMRT. Tfc in 3sc. S/off in fast CW. (DW)

22534.5: SAB, GW NODE GOETEBORG. CW, Channel free marker (Globe) "SAB." Tfc to ships in Globedata. (DW)

22924.0: UNID, RAF Port Stanley (?) PICC// On standby thru 1400z. (DW)

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22951: HBD20: MFA Berne 0820Z ARQ 5LG msg to unkwn, 1024Z HBD20/4 s/off. (ML)

22967.0: UNID, SWISS DIPLO SITOR/A//100/E/170 Mostly irs. "BMES BMES" (Nairobi) and "HBD2" and "No message." (DW)

23101.7: UNID, EGYPTIAN DIPLO, SITOR/A//100/E/170 Weak, in irs mode. 1630z short opchat in Arabic(ATU80) then s/off. (DW)

23174.5: MTS, RAF PORT STANLEY PICC//. (DW)

23174.5: UNID, On standby thru 2000z, no app tfc. (DW)

23174.5: MTS, RAF PORT STANLEY PICC//. (DW)

23174.5: UNID, On standby. 1922z "GXQ de MTS lolo pal int zbz pse k." (DW)

23190.0: P6Z: Paris, France 0840Z FEC-A 192/400 MFA with svc message to N2G, San'a embassy. (PT)

24711.7: RFTJT: FN Dakar area 1200 Arq-E3 192/400 5LG to RFFIM (FN Paris). RFFUHFS (FAF Loc?) on AFL cid. (RH2)

25350.15: AB, BENGHAZI RADIO CW Strong 3rd harmonic of 8450. Marker "cq de 5AB." (DW)

25547.0: UNID, MFA Rome 1536 Rs-ARQ 228.5/170 Betas only! Not heard for many months! (RH2)

This month's contributors were:

Chris Steele (CS-TX)

Craig Rose (CR)

Dan Gillespie (DG)

Dave Tomasko (DT)

Day Watson (DW)

Dwight Simpson (DS2)

Leroy Hogan (LH)

MidAtlantic (MADX)

Murray Lehman (ML)

Peter Thompson (PT)

Robert Hall (RH2)

Robert Hall (RH2)

Ron Perron (RP)

Again, thank you all for the excellent work that you have done here! And readers please note, if you have not contributed, please do so. We can always use a few more.

Last Word

Next month I am going to continue looking at computer-assisted radio monitoring by looking at the RX 320 in more detail. More importantly, I'm going to be introducing you to a very exciting software package that has been designed specifically for that radio and its use in the way I described at the beginning of the column.

Again, don't worry. I'm not going to be leaving anyone behind with this project, and you will still find your logs, the reader's letters, and coverage of your regularly ute services.

Whatever your interests, if you do chose to follow along with me as I undertake this little voyage of discovery, you will be well rewarded with important new skills and knowledge by the time we are finished. I'm going to demystify computer networking, the Internet and DSP radios in ways that are not being done in other magazines. More importantly you will be able to do things with your existing computer that you may never have thought possible.

No matter what, it is going to be fun and informative. So please keep those logs coming, even if you have to turn a dial to do it. No matter how you get them to me, they are always appreciated. And as always, may your ute monitoring sessions be informative, enjoyable, and fun! ■

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Norm Spends A Dollar

I now have a Hewlett Packard computer, and its operating speed is higher than most any frequency I've ever listened to on a scanner (Except for that time I think I overheard some Congressman named Billy make a cordless phone call to a sheep).

My friend, Norm isn't quite as advanced: his modem still uses Morse code, and because of that he can only connect to one Internet service provider, which I think is in Newington, CT. In a recent e-mail, Norm asked for some help with an antenna project. Why not? I thought, and he went on to explain that it wouldn't involve engagement with any government officials so long as we were sufficiently "discreet."

Ahhh, central Maine in the Black-Fly season. It coincides with the climate changes there - they appear the first day you can go outside without a parka, and stay 'til late August, when you put it back on.

"What are we putting up?" I asked him.

"Just a vertical," his reply.

"And you want ME to handle the ground radials, right?"

"No, old man," he said. "This new AAR-RRRGGGGHH-5 doesn't need radials."

The pine trees here were over 100 feet tall. There was no room for a guyed tower, and I knew he didn't have the bucks for a self-supporting tower. Hmm. Let's do the equation:

Lightweight antenna. No tower. Works better up high. No tower. Big, tall trees. No tower.

"You're not thinking of putting it on the top of a tree, are you?"

"Old man," he said, "Trees are free! Put up a ladder next to a stairway, would you? Besides, the tops of the trees move with the wind, instead of standing there trying to fight it."

He had me there. "Norm, I know you don't climb trees, and anyone looking at me from the wing seat of a 727 enroute to Topeka could tell that I'm the tree?"

"Buddy, it's all taken care of," Norm said. "The guy next door is 26 years old, healthy as a mule, and he's a logger! He'll climb anything you put in front of him."

"And what will this cost you?" I asked.

"Three cases of..."

"Oh--I see. Have you told him what brand you're thinking of giving him, or has he specified a brand?"

"There's nothing wrong with Discount-Dave's Generic," Norm said.

"He'll climb right up there and throw the antenna back down at you if you offer him that," I said. Norm didn't respond. I gave up arguing with Norm over money last year for Lent - and I'm not even Catholic. He began checking the knots in his rope.

Emile was big, as lumberjacks go. He was big even as draft-horses go, and unless I had missed my guess, he had gargled with an adult beverage right after breakfast.

"Normie! Whaddya doon?" he asked.

"Just checking your rope, buddy."

"Normie," Emile bellowed, "That's not rope! That's not even clothesline! I've got rope." Emile sauntered off.

Emile soon came back, dragging a huge canvas bag. He had "looped" his line the way tower riggers do - a trick that allows you to stuff it into a bag and pull it out by the end, without ever tangling. His bag contained 150 feet of one-inch nylon rope - worth more than Norm had paid for several of his cars. "Now - zactly what is it you want me to do?" Emile asked.

Norm explained the installation of the antenna in great theoretical detail. Emile said he'd be right back. He was, and with a chainsaw. "Yegennahafta cut the top off. It's too rubbery."

"How much will we lose," Norm asked.

"Fifteen feet," Emile said. Norm winced. "Y'cant have it whippin around up there. Gotta be attached to a thick, rigid piece of trunk."

I felt bad for Norm because it was as if someone had just given him a free hundred-foot tower then taken back the top fifteen feet. Then I felt bad for Emile. After all this work, Norm was gonna try to stiff him with three cases of "Old Mule-drippings." I took Emile aside and we mumbled while Norm took a ride into town to foreclose on a starving widow and buy Emile's reward.

Emile did a professional job. Strapped the antenna mount to the top of the tree with plenty of muscle behind his design. Formed a drip-loop, sealed all the connectors with the high-tech goop, dressed

the cable all the way down the trunk with UV-proof cable-ties. It was truly an example of craftsmanship. I told Emile he should be proud.

Norm arrived in time to see the end result, and was really pleased. He told Emile he'd give him his "reward" as soon as he went back up to peak the dimensions, and asked Emile to take his own cell-phone up to call Norm and talk about the adjustments as Norm ran some tests. Emile and I looked at

each other; he nodded, went to his home to get the cellphone, and began climbing.

"Old man," Norm called me into the shack. "Look at this meter. It's flat as a pancake. I've never seen SWR so good. All bands. I even tried loading up on 40 and it's 1:1! This is amazing!"

The phone rang. Emile was ready to start adjusting.

"No need, old pal," Norm said. C'mon down. What's that? Is it getting out?

OK, wait a minute and I'll see." And he did not see, because he was not getting out. Not six inches was he getting out.

"What dummy load!" Norm asked. "Who told you to put a dummy load up there? It was Bill, wasn't it?"

"Nice guy, Bill," Norm said to me. He wants me to send fifty bucks cash and connect the line to the antenna. Then he wants another \$50.

Norm sat and looked at me, looked down at his rig and picked up the phone again. "Sure, buddy. A hundred bucks it is. And apology for being so cheap, you can keep the beer too."

"Norm," I said, "I'm really proud of you. That's the way to treat a neighbor. You'll soon see changes in the way he acts toward you," I said.

"Maybe - maybe not," Norm said.

"Whaddya mean," I asked.

"Well, old man. I still remember enough high-school French to understand the Quebecois version of what to do with that beer," he said.

"Arf," said Chump, as he lifted his head and laid his chin across Norm's foot.

"Amen, buddy," Norm said, and scratched Chump behind the ears. I think I really did see a tiny moth fly away when Norm opened his wallet on the way back to the tree. ■

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