TUNE IN ON THE SECRET SERVICE

by Bob McGovern

When most people hear of the U.S. Secret Service, they immediately think of the protection of the President. However, the agency is divided into four divisions and they concern the protection of the President and other specified individuals, intelligence gathering, counterfeiting and forgery investigations, and personnel matters.

Aside from providing protective services, most Secret Service activity is routine. Much of an agent’s time is spent investigating some of the 60,000-plus forgery cases each year involving government checks or tracking down counterfeiters. Agents rarely speak about the kind of intelligence gathering which they perform.

A significant amount of this activity concerns the collection of information about people who may constitute a threat to the President. The Service is also interested in the whereabouts of these individuals and has created a computer file within the National Crime Information Center known as the U.S. Secret Service Protective File. As of November 30, 1983, 92 persons were contained in this system and most law enforcement agencies have direct access to it via teletype.

Monitoring the Secret Service can be anything from dull to exciting when the President comes to your area. With minor exceptions, most day-to-day routine operations are carried out on 165.7875 MHz, known as “Baker” and 165.3750 MHz, known as “Charlie.” These transmissions are sometimes in the repeater mode, but when simplex is adequate, it is often used.

Motorola digital voice protection (DVP) is rarely used on these channels and agents generally do very little to hide their activity by using radio codes or giving misleading information over the radio. Most agents are aware that people are listening to them and try to be discreet in their transmissions. If the subject matter is very sensitive, they will revert to landline communication or use DVP if available.

Agents are generally called over the radio by their last name. For example, if the Las Vegas office wishes to contact agent Devainey, the base will say, “Devainey, Devainey, Las Vegas base.” The agent will answer by replying, “Go ahead Las Vegas” or something similar. If you listen regularly, you can accumulate a list of agents assigned to the particular field office.

Depending upon the size of the office, you might hear surveillances on a daily basis or only once in a great while. However, agents occasionally become very personal on the radio and may say some interesting and amusing things.

Protection of the President’s cabinet is but one responsibility of the Secret Service (Courtesy Time Magazine)
FROM THE EDITOR

WANTED: COMPUTER PROGRAMS

Many MT readers have been asking us where they can get listening-oriented computer programs for the popular home computers. As a result, Grove Enterprises is giving serious consideration to the possibility of offering programs of interest. We need your help in two areas:
1) What programs do you need and for which computers? On floppy, cassette or printout? 2) What programs do you have or can you write?
For starters, how about a good frequency file for the Commodore 64? It should include a typical logsheet format with frequency, agency or service, location (state/city) and comments such as call sign, mode, time/date, signal strength, and so forth.
A sort by frequency, agency or location would be handy as well. And yes, the winning programmers will be paid! But don't send in your program before contacting us with details.
Direct your responses to Bob Grove in care of Monitoring Times. Let's get going on this new project!

WHAT HAPPENED TO OLD-FASHIONED SERVICE?

One of the saddest commentaries on modern society is the proliferation of impersonal, profit-obsessed mail order companies. Here at MT and Grove Enterprises, we receive a steady stream of disheartening letters from hobbyists who have been turned off by rudeness, neglect, misrepresentation, poor quality and other characteristics which seem to abound in today's mass market. It's a shame.

It is tempting to write off the problem as typical of large corporate disregard for the individual consumer but, unfortunately, the same criticism is made of small manufacturers and retailers as well.

The callous disregard of personal feelings of prospective customers is indefensible from any perspective. The manufacturer or dealer can only lose. Who wants to buy from a faceless address when correspondence is either ignored or brusquely and officiously answered? What continued appeal is there when telephone personnel answering for the business make it perfectly clear that you are a bother when you call for help?

Businesses like this deserve to fail and often do. And it's completely unnecessary. A warm, friendly smile is as attractive on a telephone as it is in person. It builds confidence and establishes mutual trust between the buyer and the seller.

It seems that in the work-a-day rush to increase profits something very vital has been lost. Whether we call it courtesy, friendliness, public relations or just plain old customer service, we all miss it.

Would it help if we let those vendors know why we don't buy from them? Perhaps it is too much to hope for. But I know one thing; if I or any of my colleagues at Grove Enterprises or Monitoring Times ever run across your programs, we'll pass it on.

Do you have a favorite article or column? We would like to know about it and so would our authors. You see, they don't know it yet, but the author who receives the largest vote from our readers will receive a $25 bonus this month.

And while you are at it, won't you let us know what subjects or topics you would like to see covered more in the pages of MT? Who knows, maybe your suggested article will bring some author a bonus next time we take a poll!

You say you would like to try your hand at writing? We'll be happy to pay you $25 for each article, 500-1000 words, accepted for publication and thrown in a year's subscription to MT as well! But query us first to see if we can use the subject before sending in the manuscript.

REMEMBER! "S.A.S.E."

We at Monitoring Times constantly receive letters from readers which begin, "Please send me everything you have on..."

As much as we would like to help, we are not a public library service. Letters received with a Self-Addressed Stamped Envelope will be answered.

And as always, my telephone line is open for pre-paid calls weekdays 1-5 pm Eastern (704-837-2210)...Bob

VOTE
FOR YOUR FAVORITE ARTICLE

Do you have a favorite article or column? We would like to know about it and so would our authors. You see, they don't know it yet, but the author who receives the largest vote from our readers will receive a $25 bonus this month!

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MAY WE BE OF SERVICE?

A number of readers and listeners contact our offices requesting information and help with their receiving equipment. Often, the requests concern repair or modification of scanners and shortwave receivers. Grove Enterprises is seriously considering expanding our operations to accommodate the service support of our clients. We would like to hear from MT readers as to what types of service, maintenance and modification procedures you would like and what you cannot readily find available in the present marketplace.

Please direct your comments and recommendations to Bob Grove in care of MT.

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Hi! Got my copy of Monitoring Times (Jan 1984) today and came across a most interesting news item on page 17, "The News of Services." This news item dealt with the method of wrapping a piece of metal foil around a twin lead transmission line and adjusting its position until the TV picture comes in clearly. Contrary to the news item, the foil does not act as a trap; it acts as an impedance matching device, a capacitor, across the line. The simplified drawing below illustrates the concept.

As illustrated, an impedance matching device serves only to improve the standing wave ratio (SWR) on the line and does absolutely nothing to unscramble pay TV signals. Impedance matching devices are perfectly legal and can be bought in most radio stores.

Don't try to use foil around a coaxial cable; it just won't work. In coaxial cable the turning device must be placed between the inner and outer conductors of cable. Matter of fact, I invented such a device for high power application in the VHF band way back in 1963. The patent number is 3,340,485.

I have one of these for an impedance matching device, a home made or a commercial product to improve transmission quality represents sound engineering.

I have never heard anyone call it illegal to use. I think somebody got their wires crossed or perhaps the authorities are using scare tactics or perhaps there is the addition of an illegal unscrambler being used. Distorted news reporting appears to be the rule rather than the exception these days. Don't believe everything you read.

Maybe, one of these days, I'll write an article for Monitoring Times on impedance matching.

Wilfred N. Caron Ridgecrest, CA

Since early December 1983, I have been listening to Spanish numbers transmis-
sions on 5985 MHz.
The schedule seems to be as follows:
0900Z 7 days / wk-Practice message (3 long groups of 8 digit numbers)
1000Z Thurs through Sun mornings, short messages (20-30 digit groups)
1030Z Repeat of 1000 hrs message

All transmissions are amplitude modulation, female voice. "Practice message" tape is getting pretty well worn out, so the first or last group fades out losing 2 digits.

Ted Wilke
Richardson, TX

First, I want to tell you how much I enjoy Monitoring Times. I first started monitoring when I was 13 years old, way back in 1941, when my dad bought me an Echophone EC-1 for all of $21. From there I went to an S-20R followed by an HRO-50. In the late 50's and 60's, Tom Kneitel and I fed each other information.

I have been employed in Public Safety Communications since 1948 and the more involved I got, the less time I spent in monitoring. As SSB came into being I gave it up except for scanning.

It was MT that got me back into it again and I now have an FSR-7700 which I enjoy. I really look forward to receiving MT. Keep up the good work.

John H. Atkinson
Cameron Park, CA

As this is written I have had my Regency Model 5000 for about 2 1/2 weeks. It, so far anyhow, has proven to be an excellent unit.

Following is some frequency information from the past two weeks of monitoring.

239.8 Plattsburgh "Metro" 275.8 "Ground Control"
255.9 "Town Hall" (simcasts 126.2)
321.0 SAC
311.0 SAC
360.0 Plattsburgh/Burlington Int l departure control
318.0 Air-alarm refueling 266.5 " "

It will be interesting to see what the JIL SX-400 and Bearcat's latest offering look like in comparison.

As a final note: it sure is great to see Monitoring Times coming on a monthly basis.

Wallace H. Day
Plattsburgh, NY

What are your thoughts on offering the frequency lists in each magazine on cassette or diskette to interested MT subscribers? A fee could be charged based on material, time, etc. for each duplicate. Of course, an agreement would probably be necessary to avoid unscrupulous persons from assembling a frequency directory for personal profit.

As the frequency list is listed in "Listener's Log" and in other regular features on MT would already be type or disk, any organized and complete listing could be accumulated quite easily. In addition, those who send frequencies to this publication could submit these on cassette or diskette, eliminating repetition of tedious data entry. In other words, if it's already recorded, why do it again?

Before closing, let me say that MT is my favorite "monitoring-type" magazine. MT is always enjoyable, informative, concise and informative. I hope that MT and I enjoy many years together. Thanks for a great publication.

Joe H. Takacs
Lexington, KY

(Thanks, Joe. How about it, MT readers? What would you like in the way of data sheets and computer programs? While we use two Televideo 802H (20 Megabyte) hard disk systems for the MT/Grove Enterprises offices, we just bought a Commodore 64 system to start the project. Let me know!...Bob)

Thank you very much for your kind, personal service. You answered the question I had about the W-600 and I purchased one from you the next day. I then went to my friendly computer store and purchased an Epson RX-80 printer, wired the proper cables and box, is this ever a neat set-up! After using Hamtext and a VIC-20, this new system has me spoiled. I am driving the unit from my Yaesu FRG-7700 with a DA100D active antenna, and even in my apartment situation, I am getting many RTTY stations I never thought possible. Can't wait until I can put up a decent skywire--many projects! I spend many of my spare hours away from work listening to just about everything, so if I hear anything really good I'll let you know.

Also, thank you for sending the new LED for my ANT-4, not to mention your instructions for installation were the same. Works great on all my scanners.

I really appreciate your service, especially since I am in a service-oriented business myself at the present.

I enjoy Monitoring Times, and look forward to the new issue. Lots of good stuff. In a nutshell, you...
The RadioSpectrum: A Gift to the Weatherwise

by Bert Humemt

PART V

MARINE WEATHER BROADCASTS (SSB)

All over the world, numerous HF coastal stations transmit marine weather information in the 4, 5, 8, 12, 16 and 22 MHz maritime radiotelephony bands. It would be impossible to include details of all single sidereal marine weather broadcasts in North America, let alone worldwide, in an article such as this. Therefore, my coverage of HF voice broadcasts will be restricted to a few coast stations, those whose powerful signals I frequently tune in.

For readers looking for more comprehensive lists of stations, frequencies and broadcast schedules, I recommend the following two excellent reference books: SELECTED WORLDWIDE MARINE WEATHER BROADCASTS (Stock number 003-017-00515-1) contains details of MF, HF and VHF radiotelegraph, radiotelephone, radiofacsimile and radioteleprinter broadcasts in English language, as well as VHF weather broadcasts for the Great Lakes. It also contains numerous maps showing major forecast areas, worldwide.

Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 at a price of $8.50 (domestic) and US $10.65 (foreign), this publication is in loose shear (1982) and comes in a soft cover, loose leaf format.

"RADIO AIDS TO MARINE NAVIGATION" is a real gem for those interested in broadcasts by Canadian marine radio stations. This most interesting, inexpensive, 8 1/2" x 11" book is loaded with information pertaining to MF, HF and VHF communications (SSB, CW, FM, FAX, RTTY), weather, LORAN, radiofacsimile, vessel traffic management, AMVER messages, etc.; it includes several maps, callsigns, frequencies and broadcast schedules.

The publication comes in two volumes for the Pacific region, and the other for the Atlantic and Great Lakes region. Each edition is issued twice annually (March and September 1), thus assuring "fresh" contents.

Priced at only CDN $1.00 (in Canada) and CDN $1.20 (foreign), this compendium book may be ordered from the Canadian Government Publishing Centre, Supply and Services Canada, Ottawa, Ont., Canada K1A 0S9. Make cheques or money orders payable to the Receiver General of Canada and stipulate whether you are ordering the Pacific or Atlantic volume.

The Atlantic volume contains 130 pages and covers the Eastern, as well as the Great Lakes. I find it an extremely valuable addition to the reference library in my radio shack.

Now, let's get down to a few specific, Coast stations such as NNM, WLO, WOO and VCS transmit marine weather forecasts for the eastern offshore waters of the East Coast and Gulf Coast, as well as high seas forecasts for the North Atlantic, Caribbean Sea and Gulf of Mexico. For SWLs nearer the West Coast, stations such as KMI (San Francisco, CA) and NMO (Honolulu, HI) likewise provide offshore weather forecasts, as well as the North Pacific areas.

These US broadcasts are scheduled several times daily on a number of frequencies in the various HF maritime mobile bands. They generally include gale warnings, storm warnings and hurricane warnings, all applicable, as well as routine forecasts of wind, sea and weather conditions in addition to a weather synopsis for each area.

For a sample of broadcasts which I receive quite well here at my Great Lakes QTH, refer to Table 5. In this daily routine Weather Communication Station NMM, the information is often read quite slowly, with numerous breaks, and is therefore easy to copy. These NMM broadcasts are at times fairly lengthy (e.g., 15-20 minutes duration), often include synoptic information for the eastern half of the North American continent, and even include Gulf Stream locations at the end of the 1600 and 2200 GMT transmissions.

In Table 5, the times and frequencies listed for NMM represent the complete weekly broadcast schedule (SSB) as far as that station is concerned; however, the times and frequencies shown for the other stations are by no means complete or simply represent broadcasts which I frequently listen to.

Location of Coastal Stations

<table>
<thead>
<tr>
<th>TABLE 5</th>
<th>SINGLE SIDEBAND MARINE WEATHER BROADCASTS (HF)</th>
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<tbody>
<tr>
<td>GMT</td>
<td>CALL</td>
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<td>0215</td>
<td>VCS</td>
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<td>0400</td>
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<td>0530</td>
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<td>1130</td>
<td>NNM</td>
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<td>1200</td>
<td>WOO</td>
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<td>2330</td>
<td>WOO</td>
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</table>

Great Lakes Weather

For SWLs interested in the weather for the general area of the Great Lakes, radio station WLC (Rogers City, Michigan) is an interesting source of weather information. Three times daily at 1117, 1717 and 2317 GMT, this single sidereal station broadcasts marine forecasts for Lakes Superior, Michigan, Huron and Erie, in the MAFOR code (see the Frebruary 1984 issue of NT for details of the MAFOR code). The transmissions are on 4369.6 kHz in the HF band, and 2516 kHz in the HF band (USB).

Immediately following the MAFOR code is a most interesting "weather synopsis" which provides a concise description of weather systems and their expected movements over the eastern part of North America...well worth listening to on a daily basis!

High Seas Marine Storm Warnings

For readers looking for the latest information on major storms in the Atlantic Ocean and the eastern North Pacific are broadcast each hour, in voice (AM mode) by the National Bureau of Standards (missible frequency station WWV (Fort Collins, CO) on 2.5, 5, 10, 15 and 20 MHz. These marine storm warnings are transmitted at 8 and 9 minutes after each hour for the Atlantic, and at 1040 for the Pacific.

FAX AND RTTY BROADCASTS

I am presently sitting in my radio shack, monitoring the Halifax Fleet Facsimile/Radioteletype station calling C.S.F.H. As I pen these lines, the monotonous, scratchy KLUK-KLUK-CLLKLKU of radio facsimile (FAX) has just ended; there is a pause for a few minutes while the new sound starts emanating from the loudspeaker: the high-pitched, chirping TWEELEY-TEE of radioteletype (RTTY). That's my cue to get busy, so I wheel over to the keyboard of my Commodore 64 home computer, tap-in a few commands, and voila!...high-tech! I now sit back, relax, and enjoy a new facet of my radio/weather hobby, as a continuous stream of weather data appears on the monitor screen: terminal forecasts and hourly aviation weather reports from numerous airports, ship conversations from the high seas, synoptic observations from land stations in Canada and the USA, marine forecasts for coastal areas as well as the Atlantic, Gulf

Cont'd on p.14
KQB: Veteran pirate fans know KQB has always been a quality operation. Under the direction of Mr. "Frank Purter" this station features an excellent variety of music and comedy. Recently KQB sent us their broadcasting schedule for the spring and summer season.

Between 1700 and 2300 you can look for them on 1500 and 1510. From 1600 to 0100 GMT try 11600, 11610 or 11650. Then from 0400 to 0800 they may turn up between 6225 and 6300 or 7350 and 7450 kilohertz.

The gang at KQB has been around for several years and, of course, they would like to continue broadcasting. So keep in mind that the above schedule will be maintained only on an irregular basis. If you do log this one let us know about it.

PIRATE QSLs: We have been running portions of John T. Arthur's pirate address list in past columns. Now here is more information from that list. Remember that not all of these stations are currently active.

The following may be reached via Box 5074, Hilo, HI 96720: WEAK, KCFR, KEXJ, KFAT, KMTL, KMUD-FM, KQSB, KSSM, Magnetic Storm Broadcasting, Radio Free San Francisco, Radio Telstar and Radio USA.


As always, we remind you that if you expect a reply enclose three 20-cent postage stamps with your report. The mail drop only forwards mail; it cannot guarantee you an answer. Some stations respond to mail promptly. Others never reply. In a future column we do intend to cover the art of QSLing the pirates.

Radio Venceremos: A Monitoring Times reader in Kentucky wrote requesting help in hearing Radio Venceremos. This is the best known of the anti-El Salvador government clandestines. It is operated by the Farabundo Marti National Liberation Front, a coalition of antigovernment organizations, and is frequently quoted in the American media.

As with many clandestines, frequent changes in frequency are the rule. However, Radio Venceremos can often be heard between about 0000 and 0400 GMT on frequencies slightly above or below 7000 kilohertz. Others use frequencies recently include 3675 and 6586. Programing is in Spanish.

Radio Venceremos does respond to some reception reports. If you wish to contact them the address is Aparato 7-907, Mexico City, Mexico. Let us know if you have any success.

Korea: Both North and South Korea have clandestine stations directed at one another. We do not know what kind of audience response they get in Korea, but fortunately they are not difficult to hear in North America, especially on the West Coast.

The easier of the two to log is the North's Voice of the Revolutionary Party for the Reunification of Korea. It was recently monitored here on 4120 kilohertz around 1200 GMT. For the most part programming consists of martial music and rather militant commentary, all in Korean. The frequency of 4557 is also in use.

South Korea's answer to this is Radio Echo of Hope, transmitting from Seoul. It is a more low-keyed operation featuring old Korean popular songs with some commentary. In the past the frequency of 3985 has been used, but it has been received at this location only on 6350. This one may turn up around 1100 or 1200 GMT. To the best of our knowledge the Korean clandestines do not QSL.

Switzerland: Pennsylvanian, John Demmitt informs us that last November Switzerland authorized 36 pirates to continue broadcasting on the frequencies they had been using. Apparently these are all local FM stations.

Belgium: John also tells us that in Belgium the

                                                      Books for the Ham Shack from WAYNE GREEN BOOKS

The New Weather Satellite Handbook
By Dr. Ralph E. Taggart

This new edition contains all the information on weather, satellite and space-related events that are now available. The reader will also find information on the current status of satellites and the possibility of using satellites in the future. Complete lists are also included for all current and future satellites in orbit.

$4.95

The Magic of Ham Radio
By Jerry Swart

Covers the basics of amateur radio and the equipment needed to become an experienced operator. Includes a comprehensive index to over 2000 different manufacturers and models. The reader will also find complete listing of all frequency regulations and a glossary of terms.

$4.95

World Repeater Atlas

This book provides a comprehensive listing of all repeaters in the world. It contains over 2000 listings of repeaters, covering countries, and includes a repeaters index and a glossary of terms.

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"ENROLLMENT," "FUERZAS ARMADAS," "ACAMPAHAR," "AUSGEZEICHNET." These are just a few of the different words you may encounter when using the ham bands. What do these words mean? What language is being used?

This month we are going to talk about some language identification publications.

Hundreds of dollars can be spent collecting quality linguistic titles but this is certainly not necessary for our purposes. If all of the titles mentioned here were to be purchased, they could be obtained for under $30.00.

Our desire is not to turn out polished translations but rather to identify the language being used and figure out a gisted version of the message text or operating chatter. This in turn may lead to identification of the country and perhaps the service or the activity being monitored.

The first title is "CONCISE DICTIONARY OF TWENTY-SIX LANGUAGES" (In Simultaneous Translations). The book includes English, French, Spanish, Portuguese, Italian, Rumanian, German, Dutch, Swedish, Danish, Norwegian, Polish, Czech, Serbo-Croatian, Hungarian, Finnish, Turkish, Indonesian, Swahili and Esperanto! There is also transliterated Russian, Greek, Arabic, Hebrew, Yiddish and Japanese.

The dictionary is available from Publishers Central Bureau, 1 Champion Avenue, Avenue I, New Jersey 07001. The PCB Catalog Number is 347202 and the cost is $4.98 plus $2.40 for shipping/handling. If both of the above described books are ordered at the same time the total shipping/handling cost is just $2.40.

You can add an improvement to both books by tabbing the various sections to enable turning to them quickly without having to consult the table of contents each time you wish to refer to a particular section.

Now let's take a look at a language identification publication which is especially informative for use in dealing with voice transmissions. Although primarily intended for use by hams, "The Radio Amateurs' Conversation Guide" provides valuable assistance for SWL activities as well. The Guide lists words and phrases dealing with various aspects of Amateur Radio and related technical terms plus numbers and phonetic alphabets.

The main guide has sections for English, French, Spanish, Russian, German, Italian, Portuguese and Japanese. There are five supplements available enhancing the language covered to include Swedish, Finnish, Danish, Yugoslavian and Dutch.

The guide and supplements can be ordered from TRANSELEKTRO-AMERICA, 2301 Ganelli Avenue, Long Beach, CA 90815. The cost for the guide with supplements is $16.00 Postpaid.

A recent visit to a DALTON Bookstore produced yet another language publication that will make a fine addition to my book shelf of operator aids, "DICTIONARY OF FOREIGN TERMS," Second Edition by Mason, revised and updated by Charles Berlitz. There are some 15,000 words and phrases from more than fifty languages. The DALTON price was $5.50.

To complement your language identification operating aids, I recommend a good world almanac and world atlas. The almanac contains compilations of interesting facts on the world countries of the world and of course the atlas with its maps is of definite aid in locating places which appear in the text or chatter of the activity you are monitoring.

When maps larger than those appearing in an atlas are needed you can consult the fine maps produced by the National Geographic Society.

Before someone calls me on it, permit me to explain to you the 4 special characters that are seen in Soviet transmissions. They are:

- D1D1D1D1 = AA
- D1D1D1D1D1 = IM
- D1D1D1D1D1D1 = OD
- D1D1D1D1D1D1D1 = OT

<table>
<thead>
<tr>
<th>kHz</th>
<th>DATE/TIMESTAMP(UTC)</th>
<th>CALL</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2626</td>
<td>2/21 0300</td>
<td>UMA7 DE AM3</td>
<td>SAME TRANSMISSION HRD 6/30 0014 ON 4311KHZ</td>
</tr>
<tr>
<td>2631</td>
<td>2/26 0253</td>
<td>NO CALLS. GR EQ 4 EQ 4 EQ 3 A 3 A A 3 3 3 3 7 U 7 A A 7 A 7, STOPPED AT 0342</td>
<td></td>
</tr>
<tr>
<td>2724</td>
<td>2/21 0305</td>
<td>5F GRPS,ZERO SENT AS T. SENDS AA AFTER EVERY 10 GRPS. SAME PROCEDURE 7428 AND 7492KHZ.</td>
<td></td>
</tr>
<tr>
<td>2727</td>
<td>2/21 0310</td>
<td>5F GRPS,ZERO SENT AS T.</td>
<td></td>
</tr>
<tr>
<td>3394</td>
<td>2/19 0310</td>
<td>AIDE QRT (AIL ALSO 7428 KHZ)</td>
<td></td>
</tr>
<tr>
<td>3457</td>
<td>2/19 0312</td>
<td>5F GRPS.SIM TO RFC ON 7492/7428KHZ</td>
<td></td>
</tr>
<tr>
<td>3474</td>
<td>2/23 0250</td>
<td>5 char GRPS.NBRS 23,8 PLUS LTSR AND SPEC CHAR M(CHAP) SIM 7492/7428KHZ</td>
<td></td>
</tr>
<tr>
<td>3483</td>
<td>2/21 0321</td>
<td>OCF, RCAK RM, VP VP ROY.SPANISH MTL TYPE TFC</td>
<td></td>
</tr>
<tr>
<td>4121</td>
<td>2/19 0328</td>
<td>INTER PHONE CIRCUIT.TWO FEMALES CONVERSING IN GERMAN:OPP DISCUS NEXT CALL(LIN ENGLISH) TO PHILIPPINES. XRL DE 9008-CY(GRU)+PREV 7428KHZ</td>
<td></td>
</tr>
<tr>
<td>4397</td>
<td>2/01 0103</td>
<td>XRL DE 9008-CY(GRU)+PREV 7428KHZ</td>
<td></td>
</tr>
<tr>
<td>4548</td>
<td>2/24 0140</td>
<td>XXI DE KCU.BF GRPS(KCU PREV 7428KHZ)</td>
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<tr>
<td>5550</td>
<td>2/21 0135</td>
<td>0A SENDING 5F GRPS</td>
<td></td>
</tr>
<tr>
<td>5615</td>
<td>2/11 1344</td>
<td>MLJ SENDING 5F GRPS WITH SPEC CHAR MW(ENE)</td>
<td></td>
</tr>
<tr>
<td>6122</td>
<td>2/11 1341</td>
<td>MALE ENGLISH VOICE.ROVER BARGES</td>
<td></td>
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<tr>
<td>6737</td>
<td>2/10 2203</td>
<td>BRITISH:KJ9B TO ACAPELLA</td>
<td></td>
</tr>
<tr>
<td>6842</td>
<td>2/28 0007</td>
<td>ESWB:SAN</td>
<td></td>
</tr>
<tr>
<td>6903</td>
<td>2/10 2206</td>
<td>CQ 908 HR 45 BT INTO 5F GRPS.ZERO SENT CQT AS T.</td>
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<tr>
<td>12970</td>
<td>2/26 0320</td>
<td>DAL.NORDDEICH RADIO,GFR</td>
<td></td>
</tr>
<tr>
<td>13027</td>
<td>2/29 1220</td>
<td>DAL.NORDDEICH RADIO,GFR</td>
<td></td>
</tr>
<tr>
<td>13325</td>
<td>2/10 1948</td>
<td>V VV DE HWN. PARIS (OUNLIIK) NAVAL RADIO,FRENCE</td>
<td></td>
</tr>
<tr>
<td>13248</td>
<td>2/10 1709</td>
<td>BURSTS OF HIGH SPEED SIGNAL.THEN CQ-RFRT FRM:IM1.MOSCOW AEROD.UBSR FROM HAVANA AEROD, CUBA</td>
<td></td>
</tr>
<tr>
<td>13298</td>
<td>2/29 2150</td>
<td>SPANISH VOICE. AIRCRAFT GIVES ETA HAVANA,ETN STN GIVES AIR WX</td>
<td></td>
</tr>
<tr>
<td>13351</td>
<td>2/04 1339</td>
<td>5L GRPS.PROB SOVIET.USES SPEC CHAR IM AA OR IMI.</td>
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</tr>
<tr>
<td>13352</td>
<td>2/17 2041</td>
<td>ENGLISH MALE VOICE. ENTERPRISE. FLO CHEROKOVO.GERMAN</td>
<td></td>
</tr>
<tr>
<td>13353</td>
<td>2/29 1223</td>
<td>5L GRPS. PROB SOVIET. USES 4 SPEC CHAR IM AA OR IMI.</td>
<td></td>
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<tr>
<td>13382</td>
<td>2/19 1700</td>
<td>GTF.DE.CRACKENELL, ENGLAND</td>
<td></td>
</tr>
<tr>
<td>13385</td>
<td>2/29 1225</td>
<td>UQV</td>
<td></td>
</tr>
<tr>
<td>13386</td>
<td>2/29 1221</td>
<td>CUT NBR TFC-5F GRPS-446 SENT NORMAL. REMAINDER SENT CQT:1-A-2-0-9-4,4-5-5, 6-6-7-8-9-9, 0-7</td>
<td></td>
</tr>
<tr>
<td>13414</td>
<td>2/29 1511</td>
<td>5F GRPS.DE.CRACKENELL, ENGLAND</td>
<td></td>
</tr>
<tr>
<td>13427</td>
<td>2/21 2050</td>
<td>MALE FRENCH/ENGLISH VOICE TEST TAPE</td>
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<tr>
<td>13436</td>
<td>2/28 2143</td>
<td>GERMAN</td>
<td></td>
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<tr>
<td>13438-5</td>
<td>2/28 0120</td>
<td>5LGRPS.PROB SOVIET. 4 SPEC CHAR IMAA OR IMI.</td>
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<tr>
<td>13440</td>
<td>2/22 2119</td>
<td>MALE ENGLISH VOICE.CACTUS TO EGUARD</td>
<td></td>
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<tr>
<td>13449-9</td>
<td>2/23 1219</td>
<td>6F GRPS</td>
<td></td>
</tr>
<tr>
<td>13465</td>
<td>2/27 2225</td>
<td>CTIC DE CTV. PORTUGUESE SHIP FROM MONSANTO NAVAL RADIO</td>
<td></td>
</tr>
<tr>
<td>13505</td>
<td>2/11 1817</td>
<td>85 DE 95.50 YOU WANT QSY K 95 DE 85 QSY K</td>
<td></td>
</tr>
<tr>
<td>13512</td>
<td>2/23 1216</td>
<td>48 DE OA-P.6F GRPS</td>
<td></td>
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<tr>
<td>13516</td>
<td>2/11 1319</td>
<td>5L GRPS.PROB SOVIET.4 SPEC CHAR IM AA OR IMI.</td>
<td></td>
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<tr>
<td>13660</td>
<td>2/11 1317</td>
<td>5 CHAR PER GRPS.NBRS 2,3,8 PLUS LTSR AND SPEC CHAR M(WSPANISH NYK).TFC SIM TO THAT SEND ON 7428/7492KHZ</td>
<td></td>
</tr>
<tr>
<td>13793</td>
<td>2/12 1409</td>
<td>POLISH PT TFC</td>
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</tr>
<tr>
<td>13938</td>
<td>2/04 1353</td>
<td>5L GRPS.PROB SOVIETUSES.IMS IN OE OT AA</td>
<td></td>
</tr>
<tr>
<td>13668</td>
<td>2/22 1623</td>
<td>LWP DE 90825 KCP 6F GRPS(CUT NBR) HAVEN'T SEEN THIS ONE BEFORE. USES LTS N M AOD T UHW R</td>
<td></td>
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<tr>
<td>13984</td>
<td>2/12 1355</td>
<td>5L GRPS.PROB SOVIET.USES IN OE OT AA</td>
<td></td>
</tr>
<tr>
<td>16568</td>
<td>2/19 1750</td>
<td>MALE GERMAN VOICE.APEARED BE GIVING MSG FROM HAMBURG TO SANTIAGO DE CHILE</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** Last month's item 13985 kHz, heard 1/09 1250 was probably incorrect. The signal was weak and what appeared to be number groups was perhaps a listing of frequencies.

In Cyrillic Morse code the first one equates to an accented A, the second to an accented O, the third to an accented U, the fourth to an accented E, and the last to CH. So this will not be confusing to new SWL fans, I merely indicate that characters just as they sound.
Welcome to another edition of "Tune In in Canada." First, a reader has informed me that some frequencies in the February column were incorrect. I had reported that the Quebec Provincial Police operate on 411.4625 MHz and 411.5125 MHz in Quebec City using a masking tone. It was informed that the frequencies of 411.4625 MHz and 411.5125 MHz are used across the province of Quebec, and the masking tone used is in DVP (Digital Voice Protection) format and not the RCMP and not the Provincial Police. When they transmit in the clear they identify themselves as "Forum" and the Montreal Forum is next to the RCMP building. They also speak in English or French, something the Provincial Police do not do—they always use French.

I was also informed that the other two frequencies I reported as belonging to the Provincial Police in Quebec City—411.3625 MHz and 413.0125 MHz—are probably not the Provincial Police either. 411.3625 MHz is not active and 413.0125 MHz is not assigned. The frequency is also used by the fire department. It is the City of Montreal North fire department that uses call sign XJF 511.

In addition the Provincial Police in Quebec have ten channels across Quebec which are rented from Bell Canada. They are:

- Ch 3 166.500
- Ch 4 167.340 171.480
- Ch 5 167.040 171.930
- Ch 6 166.880 171.210
- Ch 7 166.620 171.810
- Ch 8 166.830 172.080
- Ch 9 167.010 172.200
- Ch 10 166.650 171.780

Simplex 171.180
Simplex 172.020
Simplex 171.075

Here are some other QUEBEC frequencies:

- ISLAND OF MONTREAL FIRE DEPT

FREQ MHz/Agency/Callsign
412.7625 Dispatch/XJG 69
412.7625 P (Paired freq)
412.4875 Chiefs
417.4875 P
413.25625 Tactical
MONTREAL NORTH FIRE DEPT
413.0125 Dispatch/XJF 511
413.0875 Mutual Aid
MONTREAL EAST FIRE DEPT
412.7125 Dispatch/XJX 266
417.7125 P
413.0875 Mutual Aid
ST LOURAND FIRE DEPT
412.2875 Dispatch/XJX 447
417.2875 P

ANJOU FIRE DEPT
412.2875 Dispatch/XJF 230
417.2875 P
413.0875 Mutual Aid
ST LOURAND FIRE DEPT
412.8625 Dispatch/XJX 963
412.4375 Mutual Aid
417.4375 P
MOUNT ROYAL FIRE DEPT
413.4125 Dispatch/XJX 959
412.4375 Mutual Aid
417.4375 P
OUTREMONT FIRE DEPT
413.3375 Dispatch/XJX 959
412.4375 Mutual Aid
417.4375 P
WESTMOUNT FIRE DEPT
413.4875 Dispatch/XJF 78
412.4375 Mutual Aid
417.4375 P
COTE ST LUC FIRE DEPT
413.1625 Dispatch/EJX 91
412.4375 Mutual Aid
417.4375 P
HAMPSTEAD FIRE DEPT
413.2125 Dispatch/XJX 36
412.325 Mutual Aid
417.4375 P
POINTE CLAIRE, BEACONS FIELD & KIRKLAND FIRE DEPTS
412.1875 Dispatch
417.1875 P

Gilles Thibodeau writes that with the coming of spring, some frequencies worth monitoring in the province of Quebec are 148.655, 148.685, 148.720, 148.750, 148.800, 148.810 MHz—these belong to the Quebec Emergency Measures Organization and the Quebec Ministry of the Environment. Their job is to watch for inundation in certain areas and cities.

Frequency 148.780 MHz is for area 5 (Sherbrooke, Richmond, Cistique, Lac Mégantic) 148.810 MHz is for Quebec, Levis, St Joseph, Beaucer, St Georges de Beauce and the same frequencies are also used by the Quebec Provincial Police to reach the city police departments.

Finally, from the St John, New Brunswick area, a request for some frequencies has come. Following is a partial list from that area:

FREQ MHz/Agency/Callsign
152.240 Maritime Telegraph/Telephone/GFF 684
158.220 P
160.365 Canadian Nat’l R/CH 381
160.665 ** " "
160.785 " "
160.935 " "
161.025 " "
161.415 " "
163.440 Air-Page Answr Svc/CHC 350
164.430 " "
168.450 P
168.480 P
168.500 P
143.325 Pye Electronics/CHC 356
148.495 P
152.600 New Brunswick Telephone/CHD 60
157.860 P
164.490 " "
168.510 P

467.0125 " "
459.025 P

...and this interesting contribution from Ron Tull in Whitehorse, Yukon Territorial Police Force.

116.600 Airport Int’l
118.300 P
121.900 " "
122.600 P
126.700 P
126.275 " "
122.900 P
118.500 Trans North Turbo Airlines
123.450 P
152.150 Yellow Cabs
155.580 P
162.230 P
170.470 P
163.220 Yukon Taxi Svc
155.790 Ambulance/VT-Gov
153.830 Fire Dept
153.380 City Dept
153.480 RCMP
155.670 P
155.160 RCMP (Undercover)
162.440 P
166.110 D.G.C.
160.170 White Cass Yukon RR
160.305 P
152.540 NW Telephone/radio-phone
152.630 P
152.720 " "
152.810 P
157.800 P
157.890 P
157.900 Bus Transit
153.470 GoV Radioophone

That’s it for this time. Keep up the requests for frequencies, and I will eventually get to all of them. Until next time—Good Monitoring.

While we were out... SOMETHING HAPPENED!

Now you can record all the scanner action that occurred while you were away for playback later. The Scan Record reporter will automatically turn on your tape recorder when your scanner is receiving a message and route the audio from the scanner to the recorder.

The scanner runs only when a message is received. It does not run when the scanner is just scanning. This lets you record a lot of traffic on one tape. In addition to scanners, it will work with any receiver that has a squelch control.

The easy to use ScanRecord features user-selectable drop out delay, adjustable sensitivity, activity indicator and recorder control switch. The unit is all solid-state with no relays to stick or wear out. It operates on 9 to 15 volts DC and can be powered by a 9 volt battery or AC adapter.

All you’ll need in addition to your scanner and the ScanRecord is a tape recorder with a microphone jack and a remote control jack. The ScanRecord comes complete with all connecting cables.

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FREE CATALOG featuring scanner accessories, carrier/subcarrier detectors, voice scramblers and unusual kits sent on request.

CAPRI ELECTRONICS
Route 1-M
Canon, GA 30520
(404) 376-3712
In order to improve on the number of distressed ships which are assisted each year, the U.S. Coast Guard (in 1955) set up the Automated Mutual-Assistance Vessel Rescue System—AMVER. This system is a computerized method of taking information supplied by ships about their course, speed, and destination and then, when an emergency arises, using that information to determine which ships are in the best positions to assist. Additional information is stored in the computer about the ships' facilities for search and rescue.

The AMVER program extends around the world, and for this reason participation by commercial ships making transoceanic voyages or voyages of more than 24 hours between ports is compulsory. Many other vessels also participate in the program and help to make it extremely successful.

For those monitoring maritime traffic radio traffic, the AMVER messages can yield some interesting information, such as the destination of the vessel, the type of vessel, the speed at which they are taking. There are four possible types of radio messages which can be filed and each of these has its own characteristics. First we will look at the messages, and then the communications system.

The first type of message, called type 1, is a sailing plan. The following information is given: the name and call sign of the ship, her position at the date and time of the position, her intended sailing plan, her speed, her destination and ETA, the call sign of the Coast Station being guarded during the voyage, and whether or not any medical personnel aboard. This message is either filed just before the vessel's departure, or as soon as possible thereafter.

The next message is the type 2 message, a deviation report. This message is sent whenever a change in course, speed, destination, etc. will cause the predicted position of the ship at any time to be more than 25 miles from her actual position. Other than the name and call sign of the ship, the type D message need only contain the information which has changed from that sent previously in the sailing plan.

The type 2 message is a position report which is sent every 36 hours during the voyage. This message contains the name and call sign of the vessel, her position with the date and time, the call sign of the coast station being guarded, and medical personnel aboard. In addition to these reports, ships' positions are also extracted from ship weather observations sent by those ships participating in the International Weather Observation Program.

The last type of report is type 3, the arrival report. Along with the call sign of the vessel it contains the position of the ship and the date and time. This report is desired to increase the accuracy of the plot being maintained by the computer, although the computer will automatically end the plot when it predicts the ship's arrival in port.

The computer takes the information from these messages, and ship's positions from weather observations, and maintains plots of the predicted positions of participating ships. When a distress call is received the appropriate search and rescue authority can get information about the positions of the ships which are in the best position to render assistance, and with information about the search and rescue characteristics of the ships.

In order to maintain accurate information messages must be sent regularly, and therefore there must be a good communications network. Many countries have coast stations which accept AMVER messages at no charge to the ship and forward these to the appropriate authorities in their own country, in turn, send them on to the U.S. Coast Guard at Governors Island. While space will not allow detailed information to be given here about each station, we shall include a list of stations which do accept AMVER messages.

Argentina
LPA General Pacheco
Australia
V15 Sydney
VIP Perth
VIO Broome
VIC Carnarvon
VID Darwin
VIR Rockhampton
VII Thursday Island
VIT Townsville
Canada
All Canadian Coast Guard Stations
Chile
CBV Valparaiso
CBA Antofagasta
Denmark
GZ Lønngby
Ecuador
HOG Guayaquil
Japan
Fiji
3DP Suva
Germany
3DPC Düsseldorf
DAN Norddeich
Great Britain
EAMVER All British Telecom Coast Stations
Ireland
EJH Helin Head
EJK Valentia Island
Italy
EJL Rome
Japan
JDF Yokosuka
JNN Xushiro
JNT Shogama
JNY Nagoya
JQG Korea
JRX Wohi
JSS Yoshiba
JNB Okinawa
Netherlands
PCG Scheveningen
PGC Scheveningen
New Zealand
ZLD Auckland
ZLT Awaroa
ZLN Wellington
ZLC Chatham Island

The Coast Guard Communication Station at Boston recently began broadcasting notices to mariners and weather information using a new radio format taking advantage of a low cost microcomputer. This service, called the Navtex system and already extensively used in Northern Europe, had never been used before in North America.

Starting at 0500 UTC (2400 Easter Standard Time), and repeated every six hours thereafter, a broadcast is made which includes standard notices to mariners, weather forecasts, weather warnings, and search and rescue alerts. These broadcasts are currently identical to those transmitted in Morse code in the MF band, but now are transmitted as well on the internationally - allocated frequency of 518 kHz. Because the radio band used is MF, propagation distances of 200 nM or more can be expected.

Additional broadcasts from new Orleans are expected to start late this year.
One of the more obscure Russian satellite series is the Iskra series (Russian for Spark). Iskra 1, an aeronaautical research satellite, was launched 29 May 1981, at 19:53 MHz (29.578 MHz). The beacon was audible from the airlock of the manned Russian space station, Salyut 7, on May 17, 1982.

The 62 pound (28 Kg) satellite apparently never fulfilled its primary objective of providing a 21 to 29 MHz linear transponder. The beacon was on 29.578 MHz and was quite audible during the satellite’s short life. Iskra 2 decayed on July 9, 1982.

Iskra 3 was pushed through the Salyut airlock by hand and suffered the same fate as Iskra 2 with a very short orbital life. Iskra 7’s beacon transmitted on 29.583 MHz and was audible until its reentry.

It is believed that both Iskra 1 and 2 were amateur radio communications transponders as follows: 15 meter uplink 21.230-21.270 MHz, 10 meter downlink: 29.590-29.670 MHz.

There may be as many as 20 Iskra’s in the program. It was expected that the next Iskra (#4) would be launched in December, again from the Salyut. This should have been an amateur radio satellite, but the Salyut was having problems and the community returned before a Progress tanker could bring up the Iskra for launch.

Listenners should be watching for a possible launch in the near future now that the Salyut is manned again. Interested monitorrists can keep up with the latest on future Iskra’s by subscribing to Amateur Satellite Report, 221 Long Swamp Road, Wolcott, CT 06716. Information should also be available on regular ARRL bulletin broadcasts and AMSAT nets worldwide.

I received a very interesting letter from Len Merkoske in Ontario, Canada recently. Len regularly listens to Russian Space activity (my favorite activity to monitor, Len) and has accumulated several interesting intercepts.

To summarize, here is Len’s list briefly:

- Cosmos 1267 Soviet Space tug 19.953 MHz
- Cosmos 1443 Soviet Space tug 19.954 MHz
- Salyut 7 TM Space Station 19.954 MHz
- Soyuz T-9 Manned Spacecraft 20.008 MHz

Very interesting, Len, and I will be looking for further contributions on Russian space activity for this column.

TVRO buffs take heart. Even though I do not own a TVRO gear (one of these days when Uncle gives me a raise or I make Chief) I still get a lot of TVRO information from different friends. As this becomes available I will present it in this column. I would be interested in receiving your logins of what is on the different birds by transponder. Drop me a line at Signals from Space, 111 N. Carrier Pkwy, B-107, Grand Prairie, Texas 75050.

RCA Americom has announced a new regional sports network on the RCA Satcom III-B satellite. The St. Louis based Sports Time cable network will be distributing its programming via Transponder 4 on RCA Satcom III-B.

The new programming service will be based around a schedule comprised of 50 and 60 games each between 50 and 60 games each of the St. Louis Cardinals, Cincinnati Reds and Kansas City Royals. Other major features will focus on college basketball, football, soccer, professional basketball, tennis, triple A baseball, horse racing, bowling, boxing, a college football show, sports talk, hunting and fishing, NFL highlights and others.

Programming is carried between 6:00 PM and midnight Monday through Friday, noon to midnight Saturdays and Sundays. This schedule is subject to change based on various sports cancellations.

RCA Satcom III-B is located at 131 degrees west.

Intelsat satellites over the Atlantic carried live television pictures of the 1984 Winter Olympics from Sarajevo, Yugoslavia. All the ABC video you saw on your home screens was relayed via the Atlantic path Intelsat network parked about 25 degrees west.

Speculation is that the summer Olympics will also get worldwide distribution via the Intelsat system. Both Atlantic and Pacific Intelsats will be involved. The best part about monitoring the Olympics directly from the satellites is no commercials!

A newsletter for amateur operators or potential operators of environmental satellite ground receiving stations has been started by Raul Alvarez, a radio amateur in Tampa, Florida. Title: WORLDVIEW, it will be published quarterly and is available to anyone, amateur or professional. The cost is $8.00 per year. This is a very interesting newsletter for the weather satellite watcher.

The address is: Worldview, c/o Raul J. Alvarez, 2512 Arch Street, Tampa, Florida 33607. Be sure to tell Raul you saw it in MP’s Signals from Space.

Those of you who are experimenting with computers and fax satellite decoding might want to check out “Using the Home Computer as a Facsimile Receiver,” by Joseph A. Ryan, December 1983, published in Weatherwise, Volume 36, Number 6. Check your local National Weather Service office and ask if they can give you a copy of this interesting project.

Frequency tip of the month is the Russian SAT’s satellites which operate on 150.000 MHz. They are quite audible on most any scanner even with indoor antennas. You can normally hear at least one satellite every 2 hours.

The signal you will hear sounds like RTTY superimposed over a time signal, which it really is. The time and data can be decoded and I will go more into this in the near future.

Finaly this month AMSAT has announced the first Space Listening contest. The AMSAT Senior VP Challenge (XVI) started 15 April 1984 and will run through 14 July 1984. In order to participate you must be equipped with amateur OSCAR 10 capability. There are several classes including ham and SWL and you do not have to be a member of AMSAT to participate.

Information can be obtained through AMSAT, P.O. Box 7320, Washington, D.C. 20044. Be sure to include a SASE for the folks at AMSAT headquarters and I hope a lot of RTTY readers are in the final standings.

The UOSAT-B that John Campa, AMSAT Senior VP, talked about in the news last month has been launched. Dubbed OSCAR 11 at launch on March 1st, the beacon went mysteriously silent. I will have more on this as it becomes available.
**Los Numeros**
3244 69213 88816 52196 63811 94216

Havana Moon

A MONITORING TIMES EXCLUSIVE
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*****
This article is dedicated to
John Demiti

*****

**AS AMERICAN AS CHERRY PIE.**
The positive 10 of a 4-digit Spanish/English transmission site—without any single doubt—is the BIGGEST story to hit the communications world in over two decades.

In addition to the frequencies of 9074, 11532 and 23975 kHz, there are many other 4-digit Spanish/English transmissions—especially in transatlantic probability—associated with the Remington/Warrenton sites.

These "other" frequencies and beacons never before revealed information will be presented elsewhere in "Revelations."

WELL DONE, GEVILEMEN.

Havana Moon

REVELATIONS: Circa 1984 AD
PART II

"...those 5-digit transmitter sites are indeed on the Cuban mainland! They are allowed to exist there because Fidel allows them to exist!..."

"...they also exist in the United States..."

From a Non-FCC source.

The voice was firm, with heavy emphasis on the word "Fidel."
The speaker, a man with many previous U.S. Government connections, is very reliable. His source, however, is a somewhat different story. This statement—unfortunately—has not been verified by an Independent source. It may or may not be true...

What is true, however, is that a few years ago, in the now defunct Newark News Radio Club Bulletin, I reported that linguistic analysis strongly indicated that the "linguistically-sterile" voice reading 4-digit Spanish and occasional English on 4307, 5840 and 9074 kHz was the same "Spanish numbers" YL as monitored on 4670, 5810, 9074, 11532 and 14968 kHz.

During the summer months of 1980, the frequency of 11496 yielded many 3-digit English as well as 4-digit Eng/Span and "X" frequency intercepts. The beacon intercepts were generally noted about 1800 hours on a daily basis. Monitors might remember that the 3-digit English (Tridades) 14968 kHz parallel frequency was 10570 kHz. This 3-digit English YL is the same as the 4-digit Spanish YL.

At about 1930 hours on June 14, 1980, a rather curious CW transmission was intercepted on 14968 kHz. The transmission was brief and was also noted at the same time on July 13th and 14th. This "marker-tape" quality transmission was "RUT RUT RUT QRU QRU SR."

What has not been reported is that a "lineup" of 10 degrees is obtained on a 3-digit English transmission of 6840 kHz at 1030 hours on June 29, 1980. This class "B" bearing was taken from Ft. Lauderdale, Florida, site. Again, the same YL as the 4-digit Spanish YL.

Monitoring Times readers also might be interested to know that Vint Hill Farms in the Warrenton/Remington area became home to the old Army Cryptographic School in 1947. Some sources indicate that this school continues to exist under another name at this site. Another similar school operated by a U.S. Army facility at Augusta, Georgia.

The Vint Hill Farms area bristles with rhombic arrays over numerous acres. These rhombics of Vint Hill Farms and nearby Arlington Hill enable the Army Security Agency (ASA) to eavesdrop on the most secret of Washington's Embassies.

Another major Vint Hill Farms type station can be found just north of San Francisco, in the famous wine producing areas of Napa and Sonoma, California. It has long been rumored that some 4 and 3-digit Spanish transmissions originate from this area. Napa valley area monitors should be able to easily confirm if this is indeed happening.

*****
Let's take a look at portions of a reply to a recent Freedom of Information Act request as filed by a "closed" monitor. This is what the FCC had to say about the request for information on 4-digit Spanish transmissions on 4670/5810 kHz:

"...while the Commission is aware of the type of transmissions to which you refer, we possess no information concerning them other than the fact that they are voice communications consisting of sequences of numbers in foreign languages or English and are believed to be of national interest outside the United States. This agency conducts random monitoring of the airwaves to enforce the provisions of the Communications Act of 1934, as amended, Title 47 U.S. Code, and the Rules and Regulations of the Commission promulgated pursuant to the Act. It, of course, does not possess any regulatory jurisdiction over foreign stations or radio transmissions that originate outside this country. Therefore, the Commission has no regulatory interest in such transmissions. Moreover, the Commission possesses no information regarding the nature of the code used or algorithms for decoding such transmissions."

This same monitor is in possession of a letter dated in 1976 that states that the 3-digit Spanish transmissions on 3060/3090 kHz originated from a site near Havana, Cuba!

The Commission—just week ago—told this "closed" monitor that the file containing this correspondence did not contain any further supporting documents or worksheets. It said that—according to the FCC—that such records and information located in Washington and the various monitoring sources were routine and destroyed after two years unless involved in an ongoing Commission enforcement case.

Another major Vint Hill Farms type station can be found just north of San Francisco, in the famous wine producing areas of Napa and Sonoma, California. It has long been rumored that some 4 and 3-digit Spanish transmissions originate from this area. Napa valley area monitors should be able to easily confirm if this is indeed happening.

*****

DID RADIO HAVANA MAKE A BOO-BOO? Uno, dos, tres... by Don Schmitz KVA4CX

A so-called Spy Numbers message was on the air in the Cuban capital of Havana on 13428 kHz. The Spanish speaking female was asking "ATTENCION OCHO CINCO TRES SIETE CERO" and she continued to call for several minutes. At 2131Z she started a 70-group message of 5-figure groups. The transmission ended with the usual "FINAL" and the carrier went down at approximately 2152Z, one minute after completion of the message. However, 13 minutes later the carrier was back on the air but this time the musical theme introduction (6 musical notes) of Radio Havana was heard. About 8 minutes later a male Spanish announcer stated that the station was "RADIO HAVANA CUBA" and a Shortwave Broadcast commenced. The program was on the air briefly and then the mistake must have been discovered because the carrier was abruptly taken off the air to any "numbers" stations causing interference, because the ARRL had never received any complaints from amateurs.

And what about those second RF sources that have been noted on some 7 MHz 5-digit Spanish transmissions? Another second source has indicated that on several occasions after 0500 hours he has detected absolute evidence of a second RF source on these "numbers" frequencies.

He's not sure of the meaning but is certain that the transmissions are detected by many monitors before and after transmissions is not so random.

"...Look well to the rainbow. The fish will rise very soon. Chico is in the house..."

Radio Swain: 1961

Find out the exact meaning of this cryptic transmission in the next issue of "Monitoring Times."

Also learn all about "beacons" and intrigue on the high-seas! Find out just what "1067 types" do when they can't "phone home!" Also, the night when a 5-digit Spanish transmission was not "one-way" will be covered in the CONCLUSION OF "REVELATIONS" IN THE NEXT ISSUE OF "MONITORING TIMES."

Time now for a Tecate and...

Adios, Havana Moon
Visitors from the U.S. who have wandered down through the South Pacific to New Zealand find their world turned upside-down.

Summer becomes winter, fall changes to the blossoms of spring and time zones enable them to live a full day into the future from the folks at home.

Now the air is different, not only cleaner and clearer as international film makers know, but it is also filled with some radio activity formerly regarded as rare DX. Looking at a Great Circle map based on New Zealand shows that many of the world’s HF signals beamed from continent to continent are often beamed across this part of the world. Even Radio Moscow’s signals beamed to their far-flying repeaters in Havana are so strong you can almost hear them without a receiver.

New Zealand has a population of only 3.2 million, yet the proportion of shortwave operators is high. Radio transmission is controlled by the New Zealand Post Office as our version of the FCC. Marine and aero radio is administered by the Ministry of Transport.

Any Hams intending a visit to this part of the world will be pleased to learn there is a reciprocal licensing agreement between our two countries. You should contact ARRL Headquarters for details.

Now there’s a real challenge for you!

Citizens Band has eleven authorized channels for general use and a further three for approved operators such as construction sites, farmers, government departments and those using CB for business communications purposes.

CITIZENS BAND
Channel Frequency
1 26.425
2 26.450
3 26.475
4 26.500 (calling)
5 26.525
6 26.550
7 26.575
8 26.600
9 26.625
10 26.650
11 26.675

(Noted channels 12-14)
12 26.700
13 26.725
14 26.750

And now for some information that’s a lot harder to get.

As one of the “general public” it is virtually impossible for me to obtain information concerning the VHF bands. For three years I have requested detailed VHF band information details from the Post Office. Each request has been answered with a photocopy of the Ham band VHF allocation. However, as readers of “Monitoring Times” know, there are certain ways and means of discovering things you want to know.

While not able to obtain a listing of actual frequency allocations, the following general guide will be of interest.

NEW ZEALAND VHF BAND ALLOCATION (MHz)
48-67 TV Ch. 1, 2, 3 video and audio(FM)
68-81 Fixed and mobile stations including police
81-88 Low Band radio telephone - transportation comp. and Mobile radio telephone - traffic cops
90-95 Broadcast FM sta.
107-108 Fire & Ambulance services
108-137 Aeronautical band. General air/ground Space operations
137-138 Mobile stations
139-144 Fixed and mobile stations

Cont’d on p.20
of Mexico and Caribbean Sea, public weather forecasts, upper air reports (winds aloft)...fascinating stuff, indeed!

Some of this meteorological information is in plain language and is therefore easy to read as the print lines stop atop the screen. However, data such as hourly weather reports, ship observations and winds aloft reports appear in a coded form. Therefore, they take somewhat longer to decode and read.

At 100 words per minute, the data can really scroll up and disappear off the top of the screen before the viewer has had sufficient time to interpret the-coded codes. Obviously, then, some means of saving the information is highly desirable.

My computer interface which is possible is the Kantronics RADIOTAP designed for use with the Commodore 64 (Also available for the VIC-20). The teletype interface includes everything necessary to interface any communications receiver with the C-64 computer, including hardware to connect the cables. With a printer attachment, the weather information can readily be saved, or the software allows the capacity to be produced simultaneously with the printout on the screen.

However, I do not yet own a printer, so I got around the problem by recording the RTTY transmissions on a cassette recorder which is connected to the RECORD output of my Kenwood R-1000 receiver. So, if I see something on the CRT screen which I will probably want to digest a little more slowly after the broadcast, I make a note of the reading on the cassette recorder's tape counter.

Later, after rewinding the tape to that number, I can display the weather information on the screen, one page at a time, and study it at my own pace. To do this, I simply take the audio feed for the RADIOTAP interface from the earphone jack of the cassette recorder instead of directly from the external speaker output of the Commodore. It does the trick beautifully.

Radio station CFH transmits virtually around the clock, on the following frequencies: 4271, 6330, 9890 and 13510 kHz. Air time is shared between FAX and RTTY. Facsimile transmissions usually start at 9:00, and radio teletype generally begins 20 to 40 minutes later. The broadcast schedule—along with details of transmission content—appears in the "RADIO AIDS TO MARINE NAVIGATION" publication discussed in the preceding section.

A local RTTY weather station that is on the air much of the time is WBR, Miami, FL. I've been monitoring this station on 8140 and 13624 kHz, but my reference books show this station on 4061.5 and 18675 kHz. WBR broadcasts contain information on upper air conditions, marine forecasts, land station observations and upper air reports. I also frequently monitor RTTY transmissions on 136.5 kHz, but I don't know where this transmitter is located, but its weather conditions are very similar to WBR's. The transmissions on many RTTY systems are identical to the rare broadcast in their call letters...

I am a newcomer to RTTY, having recently purchased my RTTY/MORSE interface. As HF signals fade, one can naturally expect dropout of the storm's information appearing on the CRT screen. But what I fully understand is the reason why certain signals, after printing beautifully, suddenly turn to garbage on the screen even though the receiver's S-meter continues to indicate high signal strength and the LED bargraph on the RADIOTAP unit continues to show proper tuning of the signal.

This garbage frequently consists of letters being printed instead of figures, and this change occurs suddenly right in the middle of a weather message which consists of figures only! The "UNSIFT ON SPACE" feature of RADIOTAP (function key F1) does not alleviate the problem. Perhaps phase shifts or other propagation effects occur as the signals bounce off the other side of the earth. It does not alleviate the problem. Perhaps phase shifts or other propagation effects occur as the signals bounce off the other side of the earth.

Some readers run into similar problems while copying RTTY with RADIOTAP or any other interface if the receiver displays an error message after having read correctly on the screen. If you would care to share your experiences with RTTY, quality of reception, problems, observations or comment re specific hardware and/or software, I would appreciate hearing from you. My mailing address is: 380 Watson Ave., Windsor, Ontario, Canada M9S 3R4.

And if there are any lucky SWLs out there who have interfaced their receivers with FAX equipment...I'd love hearing from you. If you have FAX receivers are generally expensive and probably a bit too rich for my blood at the present time, but I would appreciate hearing comments on the quality of FAX weather maps received via HF radio.

Looking at the CFH schedule of FAX broadcasts is enough to make one drool! The maps transmitted include surface analysis, weather depiction prognoses, sea surface temperature analyses, upper air charts, ice charts, satellite photos, etc.... It sure sounds as if facsimile equipment would be a nice addition to a monitoring station.

Broadcast schedules and frequencies for US, FAX and RTTY stations such as WBR (Norfolk, VA), WLO (Mobiles, AL), and NMC (San Francisco, CA) as well as foreign stations are listed in "THE ENDED WORLDWIDE MARINE WEATHER BROADCAST", as noted in the previous section.

The various weather messages on RTTY are coded in different formats. Hourly aviation weather reports are in the VOLMET format discussed earlier in this series. Ship weather observations feature their own code and we'll explain this code in detail later. Different codes are also used for land stations and for upper air observations.

Details of these and other codes are contained in a very comprehensive publication available from the Canadian Atmospheric Environment Service, Distribution Center, 4905 Dufferin St., Downsview, Ontario, Canada M3H 5T4, at $10.00 (Canadian funds), this "MANUAL OF SURFACE WEATHER OBSERVATIONS" (MANOS) is over an inch thick, and is loaded with information on the coding and decoding of weather reports. NOAA's National Weather Service undoubtedly publishes an equivalent and likely available from the Superintendent of Documents in Washington, DC.

NEXT MONTH: DECODING CW MARINE WEATHER
Logging 170 Meters
by Craig Healy (66 Cove St., Pawtucket, RI 02861)

NOTE: Author Healy has generously shared these listening

catches with fellow MT readers and would be happy to

provide a free copy of his "Top End Yearbook," a collection

of loggings throughout the last 100 years. Send an SASE (self-addressed, stamped envelope)

for your copy. And if you have any loggings to contribute please send them as well.

First, courtesy of Patrick Martin and Mike Hardester

is an identification of John Arthur's 1690 and 1700 log-
gings from last time.

1690 Kaohsiung Fishery BS in Taiwan; ID's as "Kaohsiung

yueh tien t'ai!"

1700 Keelung Fishery and Weather BS in Taiwan; ID's as

"Keelung yueh tien t'ai!"

I've recently heard through several sources that the

"cricket" stations that we hear are a system called Cubic

Argo. The other common system is Decca Hifix. This sounds like

the Morse code letter J with the first dit in a lower

tone than the rest.

| LOGGINGS (Far East Loggings Monitored from Hawaii): |
| FRQ   | TIME | DATE | TRAFFIC         |
| 1613  | 0330  | 0340 | 2/20  | RAB (Rabinal),Guatemala   |
| 1618  | 0330  | 0340 | 2/20  | CRC3413                     |
| 1625  | 1631  | 1148 | 1/24  | Cubic Argo                  |
| 1630  | 1625  | 1726 | 1/27  | M talking, short mx, gone   |
| 1632  | 0600-0603 | 2/24 | ARGO | FZ953                      |
| 1638  | 1209  | 2/28 | 1/28  | Cubic Argo                  |
| 1642  | 1616  | 2/25 | 1/25  | Weak cw sigs cubic Argo     |
| 1644  | 0346-0350 | 2/20 | LGB TLX  |
| 1652  | 0625-0644 | 2/24 | LGB TLX  |
| 1655  | 1202  | 2/28 | 1/28  | Musa                      |
| 1670  | 1227  | 2/26 | 1/26  | Man int unidentified Orienta language |
| 1673  | 0446  | 2/20 | 2/22  | PF USB                     |
| 1675  | 0630-0622 | 2/22 | PF USB  |
| 1676  | 1632  | 2/28 | Tone       |
| 1676  | 1610  | 2/25 | Papua, New Guinea, Ta!li |
| 1685  | 0427  | 2/24 | MER (Mercadores), Colombia |
| 1689  | 1515  | 2/22 | Musa (Mt.Hagen), Papua, New Guinea |
| 1721  | 1235  | 2/26 | FRB                      |
| 1726  | 1235  | 2/26 | Unidentified CW          |
| 1766  | 0626-0627 | 2/27 | Unidentified RTTY      |
| 1792  | 0344-0345 | 2/20 | FR USB station          |

SECRET SERVICE from p.1

The "big time" action is found on the air when the President comes to town. Approximately five days before his arrival, it will be obvious that someone important is coming as many new agents' names are heard on the radio and the amount of radio traffic increases considerably. Preparatory activities are also heard, often in great detail.

Numerous other radio channels are used for the visit, but due to the sensitive nature of these frequencies, they will be excluded from this article. However, you have several clues which can aid you in discovering these frequencies. (1) Most of the existing Secret Service crystal radios could easily accept crystals for these other frequencies without any re-alignment. (2) If your scanner has a search feature, use it. (3) Examine the frequency allocation tables for federal frequencies in the rear portion of Police Call (any volume). Notice the frequency spacing and keep in mind that these special listings are "classified."

Once you have found these special frequencies (usually no more than six for any visit), you will have many interesting things to hear. Code names are assigned to key subjects and places. President Reagan is known as "Reggie"; "Crown" is the name for the White House; appropriately, "Angel" is the designator for Air Force One; "Stagecoach" is the President's limousine. Many more code-nanes exist and through extensive listening, you may be able to accumulate a substantial list.

Let's assume that you know that the President will be arriving in your city on a specific date for a specific reason, such as a speech. Start listening several days before; two programmable scanners will help you do a good deal. By reading the newspaper and listening to television or radio broadcasts, you can often determine the approximate arrival time, where he will stay overnight (if applicable), and where he will speak.

The press will probably not publish the motorcade routes for security reasons; look at a detailed city map and plot the possible motorcade routes between the points involved (airport, hotel, convention center, etc.). Just prior to his arrival there will be a great deal of radio traffic on the secret service channels. But don't overlook your local law enforcement, as they may have one or more radio channels set aside solely to deal with the President's visit. This could concern security and the impoundment of vehicles which are parked along the motorcade route.

When you know this, you know the route of the motorcade!

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Power------5 watts

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www.americanradiohistory.com
CONGRATULATIONS

We're very pleased to
announce the name of the winner in our recent brain-
teaser competition. With
nearly every question answered correctly, the recipient of a book from the
Grove Library is William R.
Smith, of Brown Terrace,
Uxbridge, Mass. 01569. Congra-
tulations!

As we've mentioned before, we'd like to have more questions of a nostal-
gic nature for future brain-
teasers! We'll be putting out all old radio books and send in a
list of 10, 20 or 30 ques-
tions, with correct answers,
and be sure to give the source of your information.

RADIO DATABASE INTERNATIONAL

In a news release by
Radio Canada International and Swiss Radio Interna-
tional, it was announced that a
new feature is being intro-
duced on the SWL Digest and
Swiss Shortwave Merry-go-
Round programs. Listeners to
the two stations might have been
aware in the past of a number
of joint programs which
covered such events as the annual conventions of the
Association of North Ameri-
can Radio Clubs and the
European DX Council, and,
more recently, the huge Telecom '83 telecommunications
exhibit in Geneva.

The new project, called
Radio Database International (mentioned briefly in our
January column), will feature anticipatory reports by Don
Jensen and Noel Green, both
well known and respected
authors in the hobby. Mr. Jensen is a member of
Tropical Band DXing and was one of the founders of the
Association of North Ameri-
can Radio Clubs (having been interested in shortwave
listening and useful
information by your editor) and
Mr. Green is a top DX'er in
England and was, for a long
time, a contributor to the
BBC World Radio Club pro-
gram.

Radio Database Interna-
tional reports are heard on
the first weekend of every
month on RCI's SWL Digest, and on the second weekend of
the month on SRI's Swiss
Merry-go-Round. The two
repeatedly alternate between RCI and SRI each month.

In addition to the up-
to-the-minute listening tips
and information Don Jensen
will be joined each month by
propagation expert Professor
David Meisel whose propaga-
tion forecasts give listeners
interesting and useful insights into the changing
reception conditions on the
shortwave bands coupled with
valuable antenna information for
SWLs and DXers struggling
to cope with the vagaries of ionospheric propa-
gation.

This new feature will
complement the long running and very popular weekly DX
news reports by Glenn
Hauser, which have been one
of the most popular features of the SWL Digest program
for over seven years. Glenn's reports are now being
published as a separate program except the first
program of the month.

Both Radio Canada
International and Swiss Radio
International look forward to
sharing this exciting new feature with listeners
around the world and they
would like to receive your
comments and opinions.

Write: Radio Canada Interna-
tional, SWL Digest Program,
P.O. Box 6000, Montreal,
Quebec, Canada H3C 3A8.

Swiss Radio Interna-
tional, Swiss Shortwave Merry-go-
Round Program, Glacomettistrasse
1, CH 3000, Bern 15.

SWL HONOR ROLL

Your editor has increased
the size of the previous
SWL Honor Roll from the
Top 20 DXers to over 150
in all and this new list can be
obtained for 50¢ (stamps OK)
from P.O. Box 3333,
Cherry Hill, NJ 08034.

We are particularly anxious
and would be glad to
receive comments for
other DX Awards certificates or
the old WPE Award seals.

For those DXers who are
not aware of our DX Awards
program, we issue Award cer-
tificates showing that the

[Cont'd on p.20]

DX Highlights

by Terry L. Krueger

Greetings radio listener.

From time to time I'll try to provide
interesting DX reports for a
look at some of the
vagaries of the ionosphere.

This new feature will complement the long running and very popular weekly DX news reports by Glenn Hauser, which have been one of the most popular features of the SWL Digest program for over seven years. Glenn's reports are now being published as a separate program except the first program of the month.

Both Radio Canada International and Swiss Radio International look forward to sharing this exciting new feature with listeners around the world and they would like to receive your comments and opinions. Write: Radio Canada International, SWL Digest Program, P.O. Box 6000, Montreal, Quebec, Canada H3C 3A8. Swiss Radio International, Swiss Shortwave Merry-go-Round Program, Glacomettistrasse 1, CH 3000, Bern 15, Switzerland.

SWL HONOR ROLL

Your editor has increased the size of the previous SWL Honor Roll from the Top 20 DXers to over 150 in all and this new list can be obtained for 50¢ (stamps OK) from P.O. Box 3333, Cherry Hill, NJ 08034. We are particularly anxious to hear from all previous recipients of either WDX Award certificates or the old WPE Award seals.

Hank Bennet on Shortwave

Radio Canada International's popular "SWL Digest," the heard-on-the-DX program for shortwave enthusiasts.

[Cont'd on p.20]

NEW LOW-POWER DX

Traveler's Information Stations are popping up throughout the US, providing continuous recorded messages at parks, camping and con-
gested highways. Their power is normally less than 10 watts, and TIS's are usually confined to 530 or 1610 kHz.

I've been very pleased with KNRH-965 at St. Petersburg Municipal Pier, Florida, on 1610. KNRH-965's signal doesn't get out much beyond downtown St. Peters-
burg, which is probably a good omen, being that just
across the bay is WTZY-233 at Tampa. Program Manager Randy Dickens wel-
come new DXers and send pre-stamped, prepared cards addressed to him at the Pier.

LATIN AMERICAN NEWS

The turbulent situation in much of Latin America has lowered the power of many medium wave and shortwave outlets all at once. Although the number of regular articles within MT you can keep track of clearly on
the shortwave band, this time I'll try to relay some of the latest licensed broadcast and unlicensed activity in Latin America.

AFARAT'S RADIO

The forced departure of Yasser Arafat's "news" bureau in the Palestinian Liberation Organi-
ization faction from Tri-
poli, Lebanon last year has
caused the beheading of Arab
officials in Amman, Jordan, New York and Algiers. Radio Television Algeria is now
carrying the Voice of Pales-
tine, daily at 17000 on the
Arabic Service channel of 15370. Listen for this entirely-Arabic program's ID as "Sawat al-Filistin, Sawat Thawrath Fi Filistin," while your DX signals are being heard on the
outlet regularly, though with generally poor signals here in Florida.

QSL GUINEA FOR TWENTY CENTS!

This is the first time a
Mexican medium wave outlet has seriously appeared on an out-of-band shortwave
frequency. Regular scanning of the utility band frequencies is highly recommended for discovering such odd-
balls.

David Crawford and I have both recently received full-data QSL cards from Radio Moscow, confirming the reception of the Soviet home services relay from Cuba, currently on 4765 kHz. My report was submitted in Spanish and Crawford, a letter in another language will bring better results. In a future article I'll elaborate on

[Cont'd on p.20]
Greetings once again! It's nice to be able to report that an improvement in reception conditions has been made lately, the high frequencies showing propagation in the early evenings, from time to time, although in an irregular manner.

Eastern North America. Ecuador (WCE) has lately been very strong in the mornings, as opposed to the 0030-0700 time segment when 9745 used to be the "best bet." This is still a good signal many nights, but the 15115/17890 morning broadcasts have been more reliable. And so...let's look at the continent of ASIA!

In theory many countries are available to the shortwave listener from this continent with scheduled English-language broadcasts. However, depending on your reception area, there will be much variation in what you can really hear on a regular basis.

Many countries such as Bangladesh, Philippines, Iraq, Iran and North Korea, are not often logged, either because of inadequate power or frequencies, or because of poorly chosen times for English schedules. For example, Iraq is well heard in Arabic but not often in English.

Even two of the "giants" of broadcasting in this part of the world don't make it on the dial often: INDIA: Delhi 11620 kHz INDONESIA: Jakarta 0100: 11790, 15150 and at least 10000 on the same channels. Let us look at some better bets.

Canadian People's Republic. Radio Beijing puts in quite a regular signal, best heard between 0000-0300 on 11860/9860 with 11650 also heard but poor. Has a good service with clear announcers and fairly impartial reporting. Interesting Chinese music very often, with a nice program at 0025 called "Music Album." Also has a "self-teaching" Chinese language lesson (which I found very hard!).

For some reason, many shortwave listeners overlook Canada in their dash around the dials. Maybe it's because it seems like it's too close and not exotic enough; after all, it wouldn't make much of a big impression in the office to say, "Hey, I tuned into Canada on my shortwave receiver last night!" Not like telling about how you heard China or Tahiti.

On the other hand, Canada offers the shortwave listener some very interesting programs from three different broadcasting sources. First, there is Radio Canada International. This station beams programs around the world like other international broadcasters. Second, there is the Canadian Broadcasting Corporation's "Northern Service," aimed at people in the north of Canada who are out of reach of regular AM and FM stations. And, finally, there are several Canadian "Big City" stations that send their programs out over shortwave as well as medium wave.

While the chances are that not everyone will be able to tune into CFRX in Toronto or CFCA in Montreal, those that can will enjoy listening to programs and commercials for the people in those cities. Here is a list of those stations which send out their signals over shortwave as well as medium wave:

- CFRX (Toronto) 6,070MHz (H24)
- CFCA (Montreal) 6,005MHz (H24)
- CCKU (Vancouver) 6,160MHz
- CKZN (St. John's) 6,160MHz
- CHMP (Calgary) 6,030MHz
- CHNXX (Halifax) 6,130MHz (H24)

I have never heard the Vancouver or Calgary stations because, I suspect, I'm simply too far away. The Calgary station has only 100 watts of power, but I can easily tune to stations in eastern Canada, although Newfoundland is not that close to my home in Connecticut.

CBC Another source for shortwave programs are those of the CBC Northern Service. Not all of these are in English as the purpose for these broadcasts is to reach the French fur trappers, Eskimos and Indians who live far up north. They do have a good deal of news, interviews and weather forecasts (particularly intriguing in the winter!) in English. Here are the frequencies to try:

1200-1400GMT: 9,625 6,065MHz
1400-2300GMT: 11,720 9,625MHz
2330-0600GMT: 9,625 6,195MHz

Don't be afraid to try this CBC Northern Service, even if you live a long way from the border. I know many listeners who have picked it up down south or in the lower middle west.

Also on Sundays is a program broadcast by the CBC domestic network called, appropriately, "Sunday Morning." Hear it from 1400-1700GMT on 11,955 MHz. It's a "magazine format" type show with lots of interesting features.

RCI The chances are that after you have DXed as many of these Canadian stations as possible, the one you will eventually settle on for regular listening will be Radio Canada International.

From its studios in Montreal, RCI offers some of the best DXed shortwave programs you can hear on the air. For one thing, it has what most listeners (according to a couple of recent polls) think is far and away the best DX program on the air today.

SWL Digest, as the program is heard every weekend. In fact, the program is aired at several different times each weekend so that if you miss it once, you have another chance to catch it the next day. This show offers a great deal to the shortwave listener and/or DXer. The accent of the program is on new frequency changes, new equipment and SWL clubs.

Glenn Hauser is heard every week reporting on frequency changes. Larry Magne, who writes equipment evaluations for the World Radio-TV Handbook, is on frequently.

View of Modulator Transformers and Plate Supply Transformers for the 250 KW Collin Transmitters at RCI plant in Sackville, New Brunswick, Canada.
THE ULTIMATE SCANNER RADIO
HAS ARRIVED.

Starting today, we're standing the scanner radio on its ear. Because we've forged ahead—way ahead—in radio frequency and digital technology.

Introducing the Bearcat® Comp' iScan™ 2100.

It's the first scanner radio designed to put the power of a personal computer to work for you. Now you can scan up to two hundred channels. Stack levels of priority so you'll hear vital calls in order of importance. Automatically search, store and count transmissions for accurate "pictures" of activity within frequency limits you select.

And with automatic video memos you'll know more than you've ever known before. The channel user, special codes, jurisdictions, phone numbers, alternate frequencies—any information you've programmed is automatically displayed when the channel is active.

With ten bands including 70-centimeter, 2, 6 and 10 meter FM Amateur, Military Land Mobile, AM Aircraft, plus Low, High, UHF and UHF-T bands.

For a real earful—and eyeful—see your Bearcat scanner dealer. For the name of the dealer nearest you, just call 1-800-S-C-A-N-N-E-R.
This year’s observance of Armed Forces Day — set for Saturday, May 20 — marks the 35th anniversary of communications tests between Amateur Radio operators and military communication systems. Since 1953, this event has been scheduled during the month of May and has emphasized a continuing climate of mutual assistance and warm esteem.

Featured highlights of the nationwide celebration are the traditional military-to-amateur crossband communication test and a message-receiving test. The crossband test will include operations in continuous wave (CW), single-sideband voice (SSB), radioteletype (RTTY), and short wave television (SSTV). The receiving test consists of two special Armed Forces Day messages from the Secretary of Defense, one transmitted using the CW mode followed by the second transmitted in the RTTY mode.

These tests give both Amateur Radio operators and shortwave listeners (SWL’s) the opportunity to demonstrate their individual technical skills. Special commemorative acknowledgement QSL cards will be awarded to those Amateur Radio operators achieving a verified two-way radio contact with any of the participating military radio stations. Interpretation of these contacts by SWLs are not acknowledged by QSL cards; however, anyone who receives and accurately copies the Armed Forces Day CW and/or RTTY message from the Secretary of Defense can qualify to receive a special commemorative certificate from the Secretary.

Crossband contacts

The military-to-amateur crossband operations will be conducted from 1300 UTC to 0245 UTC, May 20. East Coast stations commence operations at 1300 UTC, 19 May, and West Coast stations commence operations at 1600 UTC, 19 May 1964. Military stations will transmit on selected military frequencies and listen for Amateur Radio stations on those portions of the amateur bands indicated below. The military operator will announce the specific amateur band frequency being monitored. Duration of these contacts should be limited to three minutes.

Radioteletype receiver testing

The radioteletype receiver test will be conducted at 25 wpm. The broadcast will be a special Armed Forces Day message from the Secretary of Defense to any Amateur Radio operator or shortwave listener desiring to participate. A 10-minute call for tuning purposes will begin at 0310 UTC, 20 May, from the following stations on the listed frequencies:

Transmitting station Frequency (kHz)
AIR 6995.5, 13997.5
204th Communication Group Andrews Air Force Base Washington, D.C.
NPM 4005, 7393, 14400
Naval Communication Area Master Station LANT Norfolk, VA
NAV 12725, 14389.5
HQ Navy-Marine Corps MARS Station Chesapeake, MD
NPM 4010, 7356, 13997.5
Naval Communication Station Fort Meade, MD
WAR 4028.5, 6997.5, 14400
U.S. Army MARS Radio Station Fort Meade, MD

The JRC NRD-515 offers more features and performance than any other receiver in its class. Exceptional selectivity and stability make this an excellent radio for RTTY and FAX reception. Designed for the serious DXer who demands the best.

NRD-515 Receiver -1.30 MHz
NDH-518 96 Channel Memory $224.00
NCM-515 Keyboard Controller $149.00
NVA-515 External Speaker $39.95

Call or write:
Universal Amateur Radio
Fred Osterman — SWL Dept.
1280 Aida Drive
Reynoldsburg, Ohio 43068
Phone: 614 866-4267

WWW.AMERICANRADIOHISTORY.COM
individual applying has received QSL cards or letters from 25, 50, 75, 100, 125, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 1250, 1500 and 2000 contacts in 10 or 20, 30, or 50 world zones, 10, 20, 30, 40, or 50 states, and 4, 6, 8, 10, or 12 DXCC entities. Full details can be obtained from the address above, and please remember to include return postage.

The other day, in the post office where I work, I was in the process of getting my route put together for the delivery. Over walks one of our postal people with a copy of MONITORING TIMES in his hand. This person is usually in best form when he is where the work isn’t, and today, seems like one of our mail handlers, Jim Duggins, had spotted a column of mine and thought he’d deliver if I was the person that wrote it. I assured him that I was, indeed, the guilty party. We all agreed that this paper really does have lots of information that just can’t be found anywhere else. Jim, by the way, is an advanced class ham operator with the call K6QG. See you next month!

MAC and her serial number and USN LC-130 Hercules prefixed XD and number (XD 017/… etc.). Recommended listening time is 0500-0900Z.

Other active frequencies for aircraft are 8867/13300/5643/10072/8486.

Finally, for those interested in my equipment, all monitoring is done on a Yaesu FRG-7, Yaesu FRG-7000 and Collins 515S of ancient vintage. Scanner is a JIL SX-250H. Antennas are a Gilford “Eavesdropper” trap dipole, a very short “longwire”, and a Discone for VHF. Other equipment consists of Marantz SuperScope cassette recorders, Akai M-10 reel to reel, a Scan-Record (as advertised) and a couple 1½ plus computer systems which I will soon be using for a look at RTTY in this part of the world.

ENGLISH BROADCASTS from p.17

CHINA-Taiwan

The Voice of Free China used to cach a lot from most listeners, but this has changed dramatically since the introduction of the evening program by relay station in Florida (transmitter of WYFR, Rochester) on 5985 kHz. 11740, 15130, 17805 are also available for use.

My best reception is around 0200 or 05985 when they are a powerful signal; announcements, however, are a bit difficult to understand. Some very interesting political, travel, and musical programs are aired; naturally, they are very hostile to the mainland regime and lose no opportunity to knock them.

If you write a report to them you may receive all sorts of souvenirs and an interesting pamphlet on Taiwan.

ISRAEL-Jerusalem

Israel is our chosen representative of the continent since its service is very reliable and its presentation is very professional. The BBC sends out a regular schedule to those who write in and they have many good programs. Of particular note are “FORUM” (discussion on current affairs), “THANK GOODNESS IT’S FRIDAY” (Sabbath eve magazine); “LET’S MEET”, “STUDIO THREE” (Arts), “MUSIC FROM ISRAEL” (Mondays), and “CALLING ALL LISTENERS” (Sundays). Our selected schedule is:

UTC 1100-1130 1200-1300 1400-1500 1600-1700 1800-1900 2000-2100 2200-2300 0000-0100 0100-0200 0200-0300 0300-0400 0400-0500
FREQ (kHz) 17630 15585 13475 11610 13720 11590 9890 1960 11655 9815 9400 21960 11655 9815 7410 0000 11655 9815 7410

JAPAN- NHK Tokyo

Radio Japan with news and economic commentaries at 2300 on 17775, and 2345 on 17825 and 15300 (Bessi); at 0130 on 21/17 MHz channels and 15195 kHz. The HF channels are not propagating well and the 17 MHz ones rarely heard.

SOUTH KOREA

Seoul can be heard at 1400 (15575/9750 kHz) and 0200 (15575 kHz) with news, travel programs, classical music by their symphony orchestra, etc. This is an “in-and-out” but when conditions are reasonable the 15 MHz channel has a super signal. Excellent audio quality also.

MONTHLY SUMMARY of MAIN INTERNATIONAL BROADCASTERS:

BEIRUT: BBC 1100-1330 21710 21660 15215 15070 11775 6195 2000-0000 11260 11765 6175 0000-0300 11750 9515 6175 6130 6005 5975 9510 6175 5975 5975 13300 15070 11775 6195 0500-0630 17805 15130 17160 0030-0700 15155 11910 9745 1700-2300 15600 15580 15445 0000-0600 15205 11740 9630 6130 5995 0200-0256 11730 9615 5995
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TR-S-80 FREQUENCY FILE

by David Fuller

(We would like to thank
Dave Fuller of Bogalusa,
Louisiana for contributing
this frequency file for
TRS-80 users.

Dave uses a TRS-80 and
MC-10 with 16K expansion
module. We would appreciate
hearing from other home PC
enthusiasts with similar
programs for popular PC's
like the Commodore 64, etc.

10 CLS
15 FOR X=1 TO 3;
20 PRINT "FREQ DIRECTORY"
25 PRINT "BY"
30 PRINT "DAVID FULLER"
35 PRINT "WHAT SERVICE
WOULD YOU LIKE?"
40 PRINT "1)AMATEUR RADIO
SERVICE"
45 PRINT "2)BUSINESS RADIO
SERVICE"
50 PRINT "3)FIRE RADIO
SERVICE"
55 PRINT "4)MEDICAL RADIO
SERVICE"
60 PRINT "5)POLICE RADIO
SERVICE"
65 PRINT "6)SCHOOL RADIO
SERVICE"
70 INPUT A$
75 IF A$="1" THEN 120
80 IF A$="2" THEN 205
90 IF A$="3" THEN 310
95 IF A$="4" THEN 410
100 IF A$="5" THEN 510
105 IF A$="6" THEN 610
110 NEXT X
115 GOTO 9999
120 FOR X=1 TO 3;
125 PRINT: NEXT X
125 PRINT "AMATEUR RADIO
SERVICE"
130 PRINT "THIS IS FOR YOUR
FREQ'S"
135 GOSUB 1000
140 PRINT "NEXT X"
145 PRINT "THIS IS FOR YOUR
FREQ'S"
150 GOSUB 1000
155 PRINT "NEXT X"
160 PRINT "NEXT X"
165 GOTO 1010
170 RETURN

1010 INPUT B$
1020 IF B$="Y" THEN 1-5
1030 IF B$="N" THEN 9999
1040 IF B$="Y" PRINT (Y)
1050 IF B$="N" PRINT (Y)
1060 GOTO 1010
1070 RETURN

9999 END

PLASTIC MASTPIPE = BETTER RECEPTION

Do metal mastpipes interfere with scanner reception? Yes, especially with balanced systems like the popular Grove Scanner Beam and others.

To avoid signal reflections and cancellations interference from a metal mast, mount any scanner antenna on the top of the mast or ground plane on a plastic extension pipe which is long enough to clear the bottom of the mast's metal element.

Alternatively, the antenna may be mounted off to the side of a metal mast or tower a distance of at least 1/2 wavelength at the lowest frequency of interest (1 foot at UHF; 3 feet at high band; 10 feet at low band). Mounting an antenna off the side of the mast adds lightning protection, assuming that the mast is well-grounded. It requires more support of the offset pipe, especially at low frequencies.

In practice, a Scanner Beam or OMNI mounted atop a 3-foot plastic PVC extension pipe on the top of the mast will provide better reception than if mounted astride the metal mastpipe. The same is true of most other vertical dipole scanner antennas.

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by Mike Edelson

This past month has produced the most mail since I started BITS. Most people asked for further info on CompuServe. I'll answer everyone's mail but it may take some time since my new job is keeping me off the computer. Please be patient; I will answer all mail.

The main source of information is the System Operator (SYSOP): Scott Loftness W3VS, CompuServe 76703,407 for EMAIL or BBS users. His mailing address is P.O.Box 23544, San Jose, CA 95153.

Many people commented that they don't know how to sign on to CompuServe. You will need a user number/password from a computer store. At the same time you'll get the phone number to call the computer and the MODEM to access the computer, too.

Now the fun starts. You dial the phone number; if you've accessed the system you'll hear a loud high frequency tone (don't hold the phone too close to your ear). If your MODEM is a direct connect type you'll hang the phone up and let the handset sit on the table.

Next, press the ENTER key; you should then be connected (if not, hit ENTER again). You should get a 3 letter, 1 number channel identifier followed by the welcome message. If after you've hit ENTER twice, you haven't signed on, you're probably disconnected from the CompuServe line and will need to dial up again.

Those of you who use phone access (non-direct connect) MODEMS would do in the same as above, but you wouldn't have the "handset on the table" problem.

If you cannot get access or wish to find the nearest computer store selling the CompuServe package, call CompuServe's Users Services at 800-889-8199 or 614-457-0802 between 9 a.m. & 9 p.m. Eastern time. To call up HELP facilities on CompuServe, Type box 5035, "GO CIS-162" OR "GO CIS-54.

If you still haven't got one and also asked me to suggest software firms. While I can't endorse one company over another (caveat emptor) I will give a brief review of some material I recently got (Yes, the P.O.B. was full).

PROTECTO ENTERPRISES (Box 550, Bartinsville, IN 46001; Ph. 312-382-5244) seems to specialize in the Commodore case (64 and VIC 20) as well as printers, software and monitors. They offer some unusual products. A program called "FILE-WRITER-A CODE-WRITER PROGRAM" is a database system. The nice thing with this program is that it accepts plain English, not "computerese"; you can program without knowing BASIC.

Protecto is eager to work with users; their catalog is free. If enough people wrote to them, they might offer software for radio buffs.

Another company to consider is ELECK-TEX, INC (6557 N. Lincoln Ave., Chicago, IL 60645; Ph 312-626-7760). This company seems to handle only T.l., but software, printers, etc. are available from various vendors.

Finally, COMPUTER MAIL ORDER deals in computers, terminals, printers, MODEMS, etc. from various vendors. They have three offices: one in West US is 800-648-3311. The address is Dept. 1107, P.O. Box 6689, Stateline, NV 89449 (In Nevada call 720-590-8544).

In the East call 800-233-8950 or 717-327-9575; that address is Dept. 1107, 477 E. Third St., Williamsport, PA 17701. Call 800-268-4559 or 416-828-0886, and that address is Dept. 1107, 2505 Dunwin Ct. Unit 1B, Mississauga, Ontario, Canada L4X 1N1.

An MT subscriber, Ken Carpenter KCAUG, President of Kantronics, recently sent me a computer programmed letter introducing himself, his company and his products. He assures me that he has "the only package for the Timex in the world and/or receive CW/RTTY."

His other software includes a QSL printer, antenna design, logging programs or scanner buffer and logging, etc. The hardware devices available even include CW/RTTY 1/0 ports. That all programs will run on cassettes and require 16K memory; some require the Timex 2040 printer. Ken was supposed to send me a sample program which I never got; I'm sure this was an oversight. Ken can be contacted at: P.O. Box 586, Vernon, AL 35592; (205)693-9815.

Again, MT and I cannot endorse any product, company or person. service.

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### NOAA WEATHER SERVICE NEW CHANNELS

Due to the growing number of VHF-FM National Weather Service broadcasting centers, four additional frequencies have been authorized for these transmissions.

The following list of frequencies has just been received by MT in time for storm season and readers are urged to listen routinely for storm information which could affect equipment installations.

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**Legend—Frequencies are identified by state**

- 75.125 MHz
- 88.125 MHz
- 162.500 MHz
- 162.500 MHz
- 162.525 MHz
- 162.500 MHz

**GOVERNMENT RADIO SYSTEMS Northern California**

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NEW ARRIVALS

NEW SOFTWARE FOR BEARCAT

COMPUSCAN

The Electra Company has released a new series of software packages to allow the computer-assisted scanner to be used with most of the popular personal computers.

Included now in the new versions are IBM PC, Atari 800, Apple II and III, Osborne and Commodore 64.

RADIO SELECTIVE TONE & VOICE PAGING SYSTEM

PAGE COM Model ET-6 selective tone and voice paging system is a complete paging system with transmitter, encoder, power supply, microphone and portable short range antenna.

The ET-6 units have two tone sequential coding for positive signaling without false calls. The transmitter has a power output of 4 watts and is approved by the FCC. A simple license application is included with each system.

Maximum effective range is between 7 to 10 miles, depending on the type of antenna and the height of the antenna above surrounding terrain. For maximum range, a high-gain ground plane type of antenna is recommended. The short range antenna furnished with the system is adequate for implant paging, but much greater range will be realized with the outdoor type.

The ET-6 transmitter will deliver a voice message to the pocket pager. There is no time limitation on the length of the voice message. Each pocket pager has an audible beep in addition to a flashing LED for high-noise areas. Extra transmitters and encoders are available on the same frequencies to enable paging from multiple locations within a building or from different locations entirely.

All ET-6 paging systems are expandable to increase system capacity to over 100 pagers. Additional equipment is required. Please contact the factory for your specific needs. Also, a tone only version of the ET system is available at reduced cost.

Pricing begins at about $400, from PAGE-COM, INC, 222 Municipal, Suite 100, Richardson, TX 75080; (214) 669-8739.

BUILD YOUR OWN BEARCAT

The Beath Company of Benton Harbor, Michigan has announced the availability of the popular (but recently-discontinued) BC-20/20 scanner in kit form.

Identical to the Electra programmable scanner, the receiver kit is to be sold through Heathkit outlet for $249 (kit no. GR-740).

GRAFSC SC-1 "DUAL MODE"

SSTV/FAX CONVERTER

The newest in a fine line of quality high-resolution television and fax equipment imported directly from Germany. This video system offers 128x128 second, 256x256 second, 512x512 second black & white SSTV receive or transmit capability and optional frame sequential (RGB), line sequential "true" 256x256 hi-resolution color with up to 6 B/W pictures storage memories.

BLACK/WHITE/SYNC LED's ensure perfect "on frequency" alignment. A frame grab circuit provides ease of loading, colorflash and "motion" SSTV pictures. In the Fax Mode, the SC-1 will receive 60, 90, 120, 240, 360 and 480 line per minute rates (automatic phasing on 300 Hz. Starts signals such as GTECN, METROSAT or WEFAX) of selectable AM/FM facsimile pictures and transmits at the 240 line rate.

The WRAASE SC-1 displays on your screen 64 grey levels! This makes for excellent detailed photographs ideal for landline conference calling. Small and rugged construction (12x4x7 inches). Optimal (128x128x16 shade) hard copy internal printer interface, multi-colored graphics key generator.

$1295.00 includes interface cables and complete English version manual and schematics. Special "Fax only" unit (FX655A) $895.00 (plus customs fee). Send $5.00 for special "Fax Information Package."

ENGINEER WANTED

Does moving to the mountains of North Carolina sound appealing? Tired of living in the fast lane? Grove Enterprises is looking for a project engineer with consumer electronics familiarity and experience in digital and RF design. Work would involve design, layout and final development of consumer receiving equipment and accessories, many of an advanced and innovative nature.

Hours are 8-4 (or 9-5, your choice) weekdays only. Plenty of time left for fishing, hiking, camping or swimming with your family. Excellent working conditions with a small, friendly staff of competent colleagues in a family atmosphere.

The pay is probably not as high as what you are getting now, but you'll live a lot longer!

For more information call Bob Grove (704-837-2216) or write P.O. Box 98, Brasstow, NC 28802.
ARRL: BOOKS FOR EVERY INTEREST

As promised last month, this month we will take a look at some of the publications sold by the American Radio Relay League, headquarters for organized amateur radio hobbyists for more than a half century. Included in the ARRL library are publications of the RSGB (Radio Society of Great Britain), the ARRL equivalent in the United Kingdom.

Most magazines serving the amateur radio hobby have an extensive publication inventory and are certainly worth exploring; for example, MT readers have been responding to the excellent book selection advertised monthly by 73 magazine, a leading-ham publication with items of interest to SWL's as well.

And now, let's sample a representative cross section of books and learning materials available from the ARRL. For more information on these and other publications from the League, write: ARRL Bookshelf, American Radio Relay League, Dept MT, 225 Main St., Newington, CT 06111.

TUTORIAL AND INTRODUCTORY

FIFTY YEARS OF AMATEURS (§5): An historical insight into the early development of amateur radio from the beginning. Loaded with early photos, catalog item reprints, old schematics and fascinating anecdotes. Nostalgic.

200 METERS AND DOWN by Clinton De Soto (§6): Written a half century ago, this reprint details the early experiments in long-range communications at LF, the only part of the spectrum for which equipment was generally available. A collection of chronicles gradually leads upward in frequency to shortwave and the beginnings of VHF communications.

THE FCC RULE BOOK (§3): Up to date (April 1983), this handy volume is a reprint with enormous illustrated expansion of the FCC part 97, rules and regulations regarding the amateur radio service. Very complete; very informative.

THE RADIO AMATEUR'S LICENSE MANUAL (§4): This classic maintained the reputation of being the traditional study guide for prospective hams. Arranged as a "course in brief" on radio, it is important to most amateurs, the manual contains sample questions and answers for all levels of licenses except the novice, now being accommodated by the volunteer examination program.

THE ARRL OPERATING MANUAL (§5): It's one thing to be the theoretical CB Morse code; it's quite another to know the protocol and procedures followed in amateur radio. This manual covers QSL'ing, traffic handling, certificates and award programs, working satellites and RTTY, use of microcomputers, and even has a chapter on shortwavelistening.

TUNE IN THE WORLD WITH HAM RADIO (§8.50): An audio-tutorial approach to the amateur class license. Includes Morse code cassette, instructional book and sample test.

ARRL CODE KIT (§8): Ready to upgrade? This twin cassette book is designed to help you raise your code copying speed from 5 to 13 WPM painlessly. An illustrated guide with study tips in included.

ARRL RADIO (§5): Concentration on easy-to-understand principles of circuit and construction techniques and antenna installation is the goal. How to etch your own circuit boards? Build you own projects? This book tells you how.

THE SATELLITE EXPERIMENTER'S HANDBOOK (§10): So you'd like to learn more about weather, TV and amateur radio to satellites. This handbook is great! Profusely illustrated and an easy conversational style make this book a delight for satellite listeners and users alike.

But don't let the easy-to-read format fool you; the text is loaded with gypsy theory and the math to prove it...if you want it.

TECHNICAL AND THEORY

THE RADIO AMATEUR'S HANDBOOK (§648 pages): Unquestionably, one publication stands out as the standard reference work for radio experimenters around the world: the ARRL handbook, published annually.

Its reputation is well-deserved; in its pages are literally-illustrated articles and chapters on every phase of communications technology, written and rewritten over the decades for easy comprehension by beginners, as well as substantive for experienced hobbists and engineers as well.

The 1984 edition is no exception. Chapters on basic electronics and introductory theory evolve into expert treatments of receivers, transmitters, antennas and specialized forms of communications.

In-depth chapters assist in design and construction of a myriad projects for reception and transmission of radio signals, including various modes, frequencies and levels of complexity.

If your budget is limited to one "how-to" book, this is it.

RADIO COMMUNICATION HANDBOOK (RSGB) (§22): While there are many hams who consider this RSGB handbook to be even better than the ARRL's, there is no question that this is a superb complement to the League's handbook.

Fully as large as the ARRL handbook, the RSGB publication presents many fresh perspectives on amateur radio and other communications techniques as well. Chapters include excellent theoretical and practical advice on receivers, transmitters, antennas and test equipment.

Don't be concerned about lack of available parts; substitutions are almost all of international registry and equivalents to hard to find items are readily available.

THE AMATEUR RADIO TECHNIQUES (RSGB) (§12.50): Homing in on transmitters, receivers, oscillators and antennas, this fine RSGB publication really gets down to the nitty gritty of design considerations for circuits. Literally illustrated.

TELEPIRTER HANDBOOK (RSGB) (Hardbound, §21): Although somewhat dated in terms of modern computerized RTTY systems, this handbook is very useful to those who are still using the older electromechanical printers.

Extensively detailed, literally illustrated, the handbook covers most of the bases (and many more) with the so-well-known EM print machines.

FM AND REPEATERS (§5): A cookbook approach to planning and building VHF FM Repeaters, completely tested, including simplex or simplex repeater. Troubleshooting, testing, mobile and fixed installations, receivers and transmitters included.

TEST EQUIPMENT FOR THE RADIO AMATEUR (RSGB) (Hardbound, §11): The art of accurate measurement is crucial to proper operation of electronic equipment. This fine reference presents design and operating parameters for oscilloscopes and monitors, wave meters and ripple, power and frequency measurement, signal strength and antenna/feedline testing.

SOLD STATE DESIGN (§7): For the hard-core circuit designer, nothing beats this manual. All-solid-state approaches to transmitter, receiver, and test equipment circuitry. Plenty of solid theory to back it up.

RADIO FREQUENCY INTER- "Where are you?" Have you ever driven yourself crazy? Do you know your neighbors crazy? Hearing strange voices in your telephone, stereo or TV? Don't go to your psychiatrist before reading this guide to nailing down RFI.

Simple-to-follow directions on the source of the problem, followed by easy-to-do cures. Lots of good background material to beef up the cookbook approach to making everybody happier.

HINTS AND KINS FOR THE RADIO AMATEUR (§4): Over the years, all of us have discovered little hints which make our jobs easier. Many of these have contributed to these discoveries over the years to the league and they are published, both in the magazine and in the ARRL editions of Hints and Kins. Tips on better signal reception and transmission, antenna performance, power supply and test equipment hints and much more. A bargain for the home exper imenter.

END-OF-WEEKEND PROJECTS FOR THE RADIO AMATEUR (§3): You don't have to be a ham to benefit from the dozens of neat home construction articles in this book. Preamps, noise filters, frequency converters, antenna switches, audio oscillators, batteries chargers and more.

ANTENNA THEORY AND CONSTRUCTION

THE ARRL ANTENNA BOOK (§8): Just as the Radio Amateur's Handbook is the world's standard reference on hobby communications, the ARRL Antenna Book is the standard reference on antenna design for all frequency ranges.

With over 500,000 copies now in circulation, the book must have a loyal following. As though the contents reveals why: fundamentals of propagation; construction details for simple and complex antenna systems for mobile or fixed use at MHz through lower-microwave, including those with

www.americanradiohistory.com
Getting Started

(If the most questions from readers involve receivers and antennas, certainly the next most prolific subject is preamplifiers and tuners.)

In this month's RF take a look at these add-ons from two perspectives, written by two competent and experienced listeners. While some of their material is redundant (both were independently asked to write their thoughts), each offers fresh insight into these classical receiver accessories...Bob

Receiver Preamps: Pros and Cons

by Charles Wendell Lovett Jr.

Many SWL's use older communication equipment, and sensitivity to noise ratio of weak signals can be a frustrating experience, particularly when tuning in stations on the higher frequencies. We have all experienced the excitement of hearing a rare DX station on the edge of readability. However, we have also experienced the disappointment of realizing that, in many instances, our receiver lacked the ability to bring this station in. This can be solved by the use of a device called a receiver preamplifier.

A receiver preamplifier amplifies the RF energy of a signal before it enters the communications receiver. If it is integrated with a preselector, it has the additional advantage of reducing unwanted spurious signals. It is connected in line between the antenna and the receiver, and usually has a quad-balanced, a frequency matching system, and a bypass switch to connect the antenna directly to the receiver when the preamplifier is not in use. There are several advantages to using a preamplifier. One of the most important is the increased input signal that it adds to a receiver above the area of 14 MHz. This is accomplished by improving the strength of the incoming signal, which has a direct relationship to the internal noise figure of the receiver.

The noise figure of a receiver is a measurement of the level of noise at which it can be used to determine the quality of the receiver. This is often expressed as a percentage, with a higher value indicating a poorer quality receiver. A good quality receiver will have a noise figure of 1 or 2 dB, while a poor quality receiver may have a noise figure of 5 or 6 dB. The noise figure of a receiver is important because it determines the ability of the receiver to amplify weak signals and bring them up to a level where they can be heard clearly.

Preamplifiers are often used in conjunction with preselectors, which are devices that select a specific frequency band for amplification. Preselectors can help to reduce the noise floor of a receiver by removing unwanted signals, and preamplifiers can then be used to further amplify the desired signal.

In summary, preamplifiers are an important part of any DXer's equipment, and they can help to improve the performance of a receiver by reducing the noise floor and increasing the sensitivity to weak signals.

Preamplifiers can be a boon or a curse, depending on their design and whether or not they have a built-in preamp. Basically, any form

www.americanradiohistory.com

PREAMPS, TUNERS AND PRESELECTORS

A closer look

by Rich Arland WPE7BYR

Today's radio market is crowded with all sorts of gadgets to add to your receiver/scanner in order to improve performance. The current trend in receiver design (i.e., wider band RF front ends, with massive gain figures) necessitates the addition of some form of RF pre-selection or tuner to allow the receiver to perform well in crowded bands. Older gear can benefit from some pre-amplification and pre-selection, too. The purpose of this article is to explore the various devices currently available to improve receiver performance and to dispel some long-held myths on pre-amplification.

Back to the not-too-distant-past, most communication receivers had coil or capacitor tuned circuits in the RF input stages. These circuits were capable of dealing with weak signals, but receivers can be good runners under uncrowded band conditions. Unfortunately, the bands (amateur and SW broadcast) are far from uncrowded.

Most RF amps have extremely high gain figures and the amp also produces thermal noise. All this is amplified and passed along to the first mixer. If there is no selectivity (tuned circuits) ahead of the RF amp, two things happen. First, the amp will amplify ALL the signals present -- the desired signal plus all other signals that appear in the input. This creates more noise.

In the case of the newer, multiband receivers, the untuned bandwidth may extend up to 150 MHz to 30 MHz! All of this crud ends up at the input to the first mixer where it produces sum and difference frequencies (products of the mixing techniques), the original signals plus whatever noise was generated by the RF amp. All of this is present at the output of the first mixer.

Everything present except the desired signal is classified as intermodulation products. These are amplified in the intermod, the poorer the receiver performs. By adding tuned circuits ahead of the RF amp, 95% of the unwanted signals are filtered out. This results in a clean signal, easily amplified by the IF stages and free from unwanted intermod.

Dynamic Range

Dynamic Range is the measurement of the ability of a receiver to cope with two signals simultaneously. Most rigs are designed for a 50 dB dynamic range; the ability to copy a weak signal in the presence of a large signal or an adjacent frequency is a true measure of a receiver's performance.

Many rigs suffer horribly from poor dynamic range; unwanted signals "muscle through" the RF amp and first mixer will destroy a rig's dynamic range. The ability of your receiver to handle this type of interference (small signals "s sure to couple to the RF input stage;

One of the best ways to improve good performance is to buy a rig which has the necessary tuned circuits in the RF input stage. Many of the new rigs don't have coils and capacitors ahead of the first RF stages. Therefore, you are left to build or buy boxes that will do the job the manufacturers should have done. These add-ons take the form of preselectors, antennas and tuners. Look at each one and see which applications they are best suited for.

Preselectors and Preamplifiers

Preselectors can be a boon or a curse, depending on their design and whether or not they have a built-in preamp. Basically, any form

Cont'd on p.28

Receive Preamps: Pros and Cons

by Charles Wendell Lovett Jr.

Many SWL's use older communication equipment, and sensitivity to noise ratio of weak signals can be a frustrating experience, particularly when tuning in stations on the higher frequencies. We have all experienced the excitement of hearing a rare DX station on the edge of readability. However, we have also experienced the disappointment of realizing that, in many instances, our receiver lacked the ability to bring this station in. This can be solved by the use of a device called a receiver preamplifier.

A receiver preamplifier amplifies the RF energy of a signal before it enters the communications receiver. If it is integrated with a preselector, it has the additional advantage of reducing unwanted spurious signals. It is connected in line between the antenna and the receiver, and usually has a quad-balanced, a frequency matching system, and a bypass switch to connect the antenna directly to the receiver when the preamplifier is not in use. There are several advantages to using a preamplifier. One of the most important is the increased input signal that it adds to a receiver above the area of 14 MHz. This is accomplished by improving the strength of the incoming signal, which has a direct relationship to the internal noise figure of the receiver.

The noise figure of a receiver is a measurement of the level of noise at which it can be used to determine the quality of the receiver. This is often expressed as a percentage, with a higher value indicating a poorer quality receiver. A good quality receiver will have a noise figure of 1 or 2 dB, while a poor quality receiver may have a noise figure of 5 or 6 dB. The noise figure of a receiver is important because it determines the ability of the receiver to amplify weak signals and bring them up to a level where they can be heard clearly.

Preamplifiers are often used in conjunction with preselectors, which are devices that select a specific frequency band for amplification. Preselectors can help to reduce the noise floor of a receiver by removing unwanted signals, and preamplifiers can then be used to further amplify the desired signal.

In summary, preamplifiers are an important part of any DXer's equipment, and they can help to improve the performance of a receiver by reducing the noise floor and increasing the sensitivity to weak signals.
PARTS LIST

- Coil L-1: 2 turns of no.26 enameled wire/close wound on top of coil L-2.
- Coil L-2: 15 turns of no.26 enameled wire/close wound on a piece of 5/8 inch diam. wood dowel.

For best results the preselector should be housed in a metal box. However, it will work if constructed on a piece of board. It will also work best if built on a printed circuit board, which you would of course have to make yourself. If you hand wire it, as opposed to putting it on a printed circuit board, make sure you keep all leads as short as possible in order to keep oscillations to an absolute minimum. Also make sure all solder joints are good, as this will also help to cut down on the oscillations. Current drain of the unit is about 3 ma from a nine volt battery, which makes it quite inexpensive to run.

SHORTWAVE PREAMPLIFIED PRESELECTION

Many listeners are not aware of the difference between a preselector and a preamplifier. A preselector is a frequency-tunable device, used to add an additional measure of RF selectivity at the antenna input of a receiver in an effort to reduce intermod and images. It may contain an amplifier ("active") or it may be merely the tuned circuit ("passive") like the popular Grove TUN-3 Mini-tuner.

A preamplifier is a stage or two of RF amplification between the antenna and receiver to increase the receiver's sensitivity to weak signals. It may be tuned or wideband.

The circuit featured here this month claims both features: it is tuned and it amplifies. It is reprinted here as contributed by Radio Canada International. We appreciate the opportunity to share this information with our readers.

INEXPENSIVE FET PRESELECTION

This preselector covers a range of 5.5 to 22 MHz approximately. It has a gain of about 4 to 6 S Units at any given frequency, but the actual gain will depend on the receiver & antenna being used.

CONSTRUCTION DETAILS

Coil L-1: 2 turns of no.26 enameled wire/close wound on top of coil L-2.
Coil L-2: 15 turns of no.26 enameled wire/close wound on a piece of 5/8 inch diam. wood dowel.

For best results the preselector should be housed in a metal box. However, it will work if constructed on a piece of board. It will also work best if built on a printed circuit board, which you would of course have to make yourself. If you hand wire it, as opposed to putting it on a printed circuit board, make sure you keep all leads as short as possible in order to keep oscillations to an absolute minimum. Also make sure all solder joints are good, as this will also help to cut down on the oscillations. Current drain of the unit is about 3 ma from a nine volt battery, which makes it quite inexpensive to run.

PARTS LIST

- C-1: 1365 pf Tuning Capacitor
- C-2, C-4, C-5: 100 pf
- C-3: 100 mfd - 15 WVDC
- J-1, J-2: Phono Jack
- J-3: Battery holder
- L-1, L-2: see construction
- L-3: 2n3819 or MFP-102 "n" Channel FET Transistor
- Q-2: 2n3664 "NPN" Transistor
- R-1: 100 K-1/2watt resistor
- R-4: 3,9 K-1/2watt resistor
- S-1: Single Polo-Single throw switch

PRO-2001 SCANNER

To add an S-meter to your scanner, first locate the receiver's schematic where to hook your Modifications. Now, can you see the soldering iron and start rummaging inside your scanner? No, not yet. First, a word of advice. Opening the case of your scanner and modifying its circuit will void its warranty. So, if your scanner is brand new, think about getting it professionally repaired before going at it. You might as well wait until the warranty expires which shouldn't be very long anyway.

Secondly, you will need the service manual for your scanner, not to be confounded with the operator's or owner's manual. This service manual, usually available directly from the manufacturer or through its distributors, will supply you with a wealth of information including specifications, operation, alignment, schematic and block diagrams, parts layout, troubleshooting and parts list.

Even if you do not intend to modify your scanner at all, it would be a good idea to get yourself a copy of the service manual right now; it might not be available when your scanner will quit on you and need repairs.

LET'S GET STARTED

An S-meter is useful to make relative comparison between two signals and help you know, for example, if one antenna is better than another, or let you know if a transmitter is a few blocks away or a weaker, distant station.

Most scanners don't have the space on their front panel to accomodate a meter, so you will need an outboard meter cabinet, preferably as metal one. The size of the meter and its cabinet depends on your taste and your pocketbook.

Since the meter will be plugged into your scanner, you can plan to use the same meter for the house and the mobile, or leave a permanent S-meter installed in the car and have a different one at home.

Figure "A" gives us an overview of what is needed inside the PRO-2001 Realistic receiver. The general idea is to sample RF from a 455 kHz IF stage through a capacitor (which lets through the AC signal but blocks any DC voltage), bring this signal to the meterplug, then through a shielded cable, inside the meter case, and finally rectify the RF signal so it will cause deflection on a DC meter.

The problem we might have with our S-meter is not enough sensitivity; that is, the S-meter will not give any reading for a weak signal or, inversely, the S-meter will not give a higher reading if an already strong signal is getting stronger. To get around this, we use a switch to select between two S-meter sensitivities, "distant" and "local."

The "local" sensitivity is picked up at the output of the first 455 kHz amplifier stage after the 455 kHz ceramic filter. The "distant" sensitivity is picked up at the output of the second receives 455 kHz amplifier stage where IF amplification is sufficient for a weak signal to cause a deflection of the meter while a strong signal won't be amplified any more.

If your scanner is not a PRO-2001, then consult your service manual. Your scanner might already have a test point hooked up to the 455 kHz IF. Also, before going out and buying a meter with a specific scale, do experiment with a V.O.M. or surplus meters to determine if you need a 50 uA meter or a less sensitive meter.

A meter too sensitive can always be shunted (a resistor across its terminals) to reduce its sensitivity, but you can't increase the sensitivity of a meter without adding an amplifier stage.

*P.O. Box 434, St. Jean, Quebec, Canada J3B 6Z8
 restrict space limitations.

Separate chapters elaborate on programs for beam headings, theory and test equipment, and transmission line measurement.

HF Antennas for All Locations (RSGB) (Hardbound; £13): Have a big backyard and want to get the most out of shortwave reception or transmission? This may be the book for you. The first chapter takes a new look at HF antennas' presents a perspective seldom examined in other works, a matter-of-fact approach to determining what will work best for you.

Simple wire antennas, directional arrays, elaborate installations; all covered with expertise.

ARRL Antenna Anthology: Over the years many articles appearing in QST magazine have deserved repetition; those dealing with commendable antenna designs are reprinted in this outstanding anthology.

RDF antennas for receiving, beams and arrays for vertical and horizontal antennas of all kinds, efficient short antennas and test equipment for the shack. A great college text.

RTTY Today by Dave Ingram (112 pages, 8-1/2" x 11", softbound; $8.95 plus $1.00 postage by Universal Electronics, Dept MT, 4555 Groves Rd., Suite 3, Columbus, OH 43212).

Few authors in the RTTY game have written as much as Dave Ingram, a highly-qualified expert in the fields of SSTV and RTTY. Ingram's latest work is an excellent tutorial on constructing all phases of RTTY from hookup of simple demodulator circuits you can build, to computerized RTTY listening position and two-way amateur set-ups as well.

Eight chapters highlight equipment available, operating procedures, frequency allocations, its use in SSTV networks, discussions about the commercial gear on the market from HAL, Infotech, Fantronics, ASA, DOM, Microlog, RAK and others.

Excellent coverage is provided on computer-peripheral approaches to RTTY reception, illustrated by examples of systems.

Most important, the book is comprehensive, up to date, easy to read and authoritative...an important book.

Clandestine Confidential - Newsletter by Gerry L. Drexler (bi-monthly, four pages, 8-1/2" x 11", $10 per year US, Canada; write: RR4, Box 160, Lake Geneva, WI 53147).

Gerry Drexler, popular Columnist for Popular Communications magazine, has announced a newsletter service to unite RTTY listeners on the latest news concerning clandestine broadcasters.

Published by MT advertiser Universal Electronics, Clandestine Confidential's inaugural (February 1984) issue contained interesting comments on nearly two dozen clandestine broadcasters in Afghanistan, Burma, Chad, El Salvador, Cuba, China, Iran, Palestine and several Mid-east and African countries.

We wish Gerry well on his project and invite MT SWL's to inquire directly at his address above for additional information. Include an SASE so he and I will remain friends.

Radio Database International, Tropical Band Survey by Lawrence Magne (44 pages, 8-1/2" x 11" softbound; $3.95 from International Broadcasting Services, Ltd., P.O. Box 300, Penn's Park, PA 19043).

This unknown World Radio TV Handbook contributor Larry Magne has released the latest edition of his Tropical Band Survey containing broadcast bands at 2250-5700 kHz portion of the spectrum.

Schedules of worldwide users of this portion of the broadcast spectrum, along with useful data regarding languages and transmitter sites.

Editor Magne is an expert in the reception field and this quality publication reflects his thorough research.


Popular "Tune in Canada" editor for MT, Norm Schrein has released yet another in his rapid-fire scanner directories, making it, all 16 at this writing! Identical in general format to all recent Fox listings, this directory is cross-reference by alphabetized user, call signs, and frequency by agency.

The book is a quality printing job can stand, large printing and loaded with comprehensive listings of virtually every imaginable scanner enthusiast's quarry.

Business, federal government, aircraft and marine, press, safety, and many more—they're all here.

Preamps: BIRLAND from p.26 of tuned circuit (with or without a preamp) can be a "preselector"; it selects a desired frequency or band of frequencies and attenuates all others. It also provides equalized output impedance across a wide range of frequencies.

A preamp can be employed to make up for any insertion loss, coaxial feedline attenuation, etc. A preselector does not have to use preamplification. If it does it is said to be an "active" device. It doesn't, it is a "passive device."

A preselector is normally inserted between the antenna and the receiver's antenna input jack. Most have a "peaking control" to select the desired band of frequencies. A preselector with an application list used in a good choice for most of the newer gear on the market. The addition of tuned circuits ahead of the receiver will greatly improve both intermod and dynamic range performance.

Tuners are very similar to preselectors. They are often in a single design normally are found in most ham shacks. Due to the wide range of frequencies that hams have to work, some form of some kind must be employed to allow one or two antennas to be used on all bands.

A tuner matches the wide broadcast antenna line impedances to a relatively low input/output impedance at the rig. In order to perform this impedance matching in coils and capacitors are used in various configurations.

There are quite a few tuner designs on the market. All have one thing in common: they are designed to provide a wide range of tunable impedances. The SWL/DXer may benefit from adding a tuner in front of his rig.

Stay Away From Preamps

Preamps can be the biggest drag or biggest headache you acquire. One thing that the newer rigs DON'T need is more RF amplification! This applies to the HF receivers as well as the VHF/UHF scanners. A preamp employed on these rigs will create more problems than it will help resolve, especially in an area of high signal levels. About the ONLY gear that requires a preamp is the older tube-type equipment and many of the early VHF/UHF receivers still on the used market.

Preamps amplify EVERYTHING over a wide range of frequencies. Most preamps are not designed with good noise figures in mind. Instead of gain, for example, in the order of 15 to 20 dB is the design criterion. This massive gain ahead of a receiver not only amplifies the wanted signals, it amplifies band noise, too. Sure, the S-meter goes way up but you still have a hard time hearing the desired signal to the increased noise generated when using the preamp.

Instead of a preamp, invest in a better antenna system. Money spent on the antenna and feedline will pay more dividends than all the intermod generated due to the misapplication of a preamp. Definitely steer clear of inexpensive TV-type mast-head preamps. Most of these devices are so-wideband tuned that they actually degrade performance dramatically. In addition, they are very prone to local signal intermod. Remember, if it doesn't have tubes, chances are that it doesn't need a preamp.

In Conclusion

We have looked at the three types of receiver accessories which can, if used correctly, greatly increase your rig's performance. A tuner and a preamp combined with its tuned circuits will attenuate the unwanted signals while providing a clear path for the desired ones. Preamplification on any rig, but most of the time it is a waste of time and money. Only the older rigs will really benefit from the use of a preamp. In any case, you pays your money and takes your chance. Good luck and good DXing!
PROFILES

CONFESSIONS OF A TEENAGE OUTBINDER!

by Dan M. in Indiana

(EDITOR'S NOTE: Monitoring Times does not condone illegal radio communications. Nevertheless, this personal insight into the amateur CB craze of the late 1970's provides interesting reading.)

Catchy title, heh? You may have read Bill Cheek's article, in the March 1984 issue of MT on "OUTBANDERS," the operations outside the legal CB frequencies. Bill covered nicely the history of the hobby; I'll deal primarily with the SSB operations above 27.300 MHz.

There are many national, international, and semi-local clubs dealing with outbanders; my involvement was with the main national SSB clubs and foreign organizations such as the Alpha Tango group from Italy who sponsored DX contests on the 11 meter band. My equipment consisted of a Siltronix 101-D and a three element beam at 20 feet. With the 100 watts ERP from the "D", working the world was no problem.

Using DX forecasts for the 10 meter ham band, I very easily predicted what times to look for stations I wanted to contact. My typical day would be to sit down in front of the "D" and tune across the band; usually, the Spanish-speaking stations from South and Central America were the first to get the DX started. About 8:30 AM I started the every-five-minute ritual of tuning through, so as to get the earliest jump on the DX when it showed. A new accent was easy to spot and the dial never moved until the QTH was revealed.

Belgium operators had to win the award for most friendly, at least into Indiana. They or - f15สำ might be racked up every hour!

Scattered in between were the Italians and, in the old days, the British Isles became the constant contact.

I became addicted to DXing, constantly tuning the band to find that elusive country that I hadn't worked yet.

I learned all the tricks to catch those rare contacts, like intentionally bumping in the middle of a known rare contact's QSO and apologizing, therefore making a contact. Another neat trick was to call a couple of times and then report anything he was trying to hear, briefly, but just enough to let him know you were there, and to make him miss a couple of words, so he would ask you to stand by. Another contact acknowledged!

A list of some of the rare contacts is located in the 76 countries/provinces I worked include Luxembourg, Lichtenstein, Gibraltar, Iceland, Greece, the Soviet Union, Zimbabwe, Greece, Spain, Iceland, Estonia, Botswana, Egypt, the Ivory Coast, Spanish Morocco, Liberia, Sri Lanka and Japan.

I also set out to work most islands and continents and have more than a total of 39, including the Azores, Canary, Faroe, Madeira, and the Falklands. They were and probably still are out there, all over the world, the international outbanders.

WORLDWIDE CB

While MT does not condone illegal use of the airwaves, we do acknowledge that the hobby is international in flavor.

Recently, MT reader Lyndel T., of Edmonton, Montana sent us a list of international on-air CB organizations and many of their operating frequencies as we share these here with MT readers.

World Wide Radio Group "WW": 27.920 LSB (P.O. Box 302, New Glasgow, N.S. Canada)
Transcontinental Net "TCN": 27.870 LSB
April Group: 27.755 LSB
CCG Group: 27.970 LSB
Boomerang Group: 27.145 LSB (Australia)
Australia Group: 27.445 LSB
The Norfolk Broads DX Club: 27.45 LSB & 27.585 LSB (New Zealand)
Riverside SSB Club: 27.445 LSB & 26.935 LSB (Ohio)
The United Kingdom Globe Trotters Group: (P.O. Box 6, Rumcorn Chesire, England, WA75YT)
Delta Ray Group: 27.755 LSB (North Wales)
Pacific International DX Group
Citizens Band Radio Social Group: 27.940 LSB (North Ireland)
Antrim County Sidebanders: 27.946 LSB (North Ireland)
Bravo Sierra Foxtrot DX Group: 27.565 LSB (England)
Delta Club: 27.565 LSB & 27.885 LSB (P.O. Box 2 B 9078, Zeffelsare, Republic of the Congo)
The World Wide Skipper Radio Club: (P.O. Box 46 Manuka ACT 2604, Australia)
Panther Charlie Citizens Radio Service: (Orange NSW Australia)
IBAN Net: 27.575 USB (The Wagnerian SCAN Club of Australia)
Canada Thunderbird Club SSB AM: (Box 118, Alert Bay, B.C. Canada, VON 1A0)
Charlie Whiskey Club

TECHNICAL TOPICS

by Bob Grove

Q I have purchased a 20/20 Bearcat 40 channel scanner. I am having trouble with what they call in the manual as "Birdies." I am also bothered with interference from Hams. Will the Grove Scanner Filter (PTF-3) eliminate this interference? (George K. MacPherson)

A "Birdies" are generated internally by the oscillators in your scanner and cannot be reduced by external means.

Images and intermodulation (overload interference) from strong local signals may be reduced or even eliminated with the Scanner Filter. (P.O. Box 50, 1400, 14100, Italy)

Q Is there any way to modify my Bearcat 210XL to receive aircraft? (Aaron Wilmore, Arlington, TX)

A No. Even if we changed the frequency coverage (which can't be done without an extensive change of the crystal circuitry), the Bearcat 210XL is designed to receive frequency modulation (FM), not the amplitude modulation (AM) transmitted by all aircraft. AM would be distorted and muffled if readable at all.

Q Is it practical to build a home-brew mobile scanner antenna? I have some old magnetic mounts that I would like to call into service. (Al Hall Jr., Wate, California)

A Basically, a 19 inch whip will serve well for aircraft, high band and UHF reception (118-172, 406-512 MHz); a shortened CB antenna (about 70 inches) will work quite well on low band (30-50 MHz).

Q How can I make a multiband scanner antenna you need to combine the characteristics of the two antennas. Most manufacturers do this by making the lower section of a wire-wound fiberglass whip about 19" long, then wrapping a number of turns of wire above that as a base load (also a decoupling trap) for the low band. Anyone out there have success with such a project and want to share your techniques with other MT readers?

Q I have been told that there is a device that can be connected to a telephone that will show the user who is calling, I am receiving crank calls and would like to get one. (name withheld)

A While commercial digital display units are available on the market, they tend to be expensive. Since crank calls are against the law, notify the security section of your local telephone company. They will arrange to have such a device monitor your line.

Q What are the common Coast Guard helicopter frequencies? (Barry Rader, Foster, OR)

A A comprehensive list of U.S. Coast Guard frequencies is included in the Shortwave Frequency Directory (BOK-K-13) from Grove Enterprises. However, a few of the most common upper sideband channels include 3120, 5692, 8980, 11198 and 15084 kHz.

Q How can I connect headophones to my scanner? (Don LaMack, Wallace, ME)

A Virtually every scanner made has a jack for the connection of an external speaker. Headphones may be substituted with no problem. If you use a pair of stereo 'phones, you may need a stereo/mono adapter, otherwise only one ear will work. Don't worry about matching impedances; modern headphoners and speakers are all in the 4-8 ohm range, usually stated on the package.

And if the size of the plug is not the same as the jack on your scanner, a plug to jack adapter should reward you with just the right adaptor.

World Wide Skipper Radio Club: (P.O. Box 46 Manuka ACT 2604, Australia)
Panther Charlie Citizens Radio Service: (Orange NSW Australia)
IBAN Net: 27.575 USB (The Wagnerian SCAN Club of Australia)
HELPFUL HINTS

WANT TO GET YOUR HAM LICENSE?

We are grateful to Bill Ellis W6GUSB, president of Murphy’s Radio Class (411 Sepulveda Blvd., Culver City, CA 90230) for providing the following sample Novice theory test with answer key. It provides excellent insight into what the prospective examinee might expect.

Now, how well did you do with last month’s study guide? Contact a nearby ham for information on taking the test and obtaining your ham license.

NOVICE EXAMINATION

1. Who is a third party in an amateur radio communication?  
a. A person listening to your transmissions at his own station.  
b. A person listening to your transmissions at your station.  
c. A person listening to your transmissions at the receiving station.  
d. A person that owns the property on which your station is located.  
e. A person participating in the communication, with or without a license.

2. What, if any, transmitting frequency privileges are authorized to the Novice class operator besides those in the 80, 40, 15 and 10 meter bands?  
a. All frequencies above 30 MHz.  
b. All frequencies below 30 MHz.  
c. All frequencies where AI/CW are allowed.  
d. All frequencies if 200 watts output is used.  
e. With what frequencies.

3. What is the only emission authorized for use by Novice class operators?  
a. AI/CW  
b. FM  
c. SSB  
d. AM  
e. TV

4. Under what circumstances, if any, may the control operator of an amateur radio station willfully or maliciously interfere with or cause interference to a radio communication or signal?  
a. Only on the 40 meter band.  
b. During evenings only.  
c. During week ends only.  
d. If power does not exceed 200 watts.  
e. Under no circumstances.

5. Which non-amateur radio stations may an FCC-licensed amateur radio station communicate?  
a. None  
b. Any  
c. Any that are authorized to communicate with you.  
d. Any that try to communicate with you.  
e. All stations, provided that the power output does not exceed 200 watts.

6. How often does an amateur radio station need to be identified?  
a. At the beginning and end of all transmissions only.  
b. At the beginning and end of all transmissions only.  
c. At the beginning of all transmissions only.  
d. Every 10 minutes and at the end of the transmission.  
e. Necessary to identify if both stations reside in the U.S.

7. What is the maximum transmitter power permitted to be used at an amateur radio station transmitting on frequencies available to the Novice class operator?  
a. 1000 watts dc input  
b. 1000 watts PE.  
c. 200 watts dc input  
d. 200 watts PE input  
e. 200 watts PE output

8. How can on-the-air transmitter tune-up be kept as short as possible?  
a. Put antennas as high as possible.  
b. Put antennas as low as possible.  
c. Use of an antenna relay switch.  
d. Use a low pass filter.  
e. Use of a dummy load for warm-ups.

9. What type of radio wave propagation makes it possible for amateur radio stations to communicate long distances?  
a. Surface communications off of the F layer.  
b. Ground waves using high frequencies.  
c. Direct waves.  
d. Skyf, provided that the surface is water.  
e. High SWR is required for long distance communications.

10. What is a convenient indoor grounding point for an amateur radio station?  
a. Hot water pipes.  
b. Cold water pipes.  
c. Front door screen.  
d. Electric stove.  
e. Radar ranges if not already grounded.

11. What type of filter should be installed on an amateur radio transmitter as the first step in reducing harmonic radiation?  
a. Brute force filter.  
b. Crystal lattice filter.  
c. High pass filter.  
d. Low pass filter.  
e. Band pass filter.

12. What station antenna is often used to measure voltage standing wave ratio?  
a. Volt meters  
b. Current meters  
c. Amp meters  
d. OHM meters  
e. VSWR meters (reflectometer)

13. What type of current changes direction over and over again in a cyclical manner?  
a. Cycle current  
b. Audio waves  
c. RF waves  
d. DC  
e. AC

14. Which are higher: radio frequencies or audio frequencies?  
a. Audio frequencies  
b. Radio frequencies  
c. Neither  
d. Both  
e. None of the above.

15. What is the unit of electrical current?  
a. Amp  
b. Volt  
c. Watt  
d. Ohm  
e. Marker

16. What does a voltmeter measure?  
a. Voltage  
b. Current  
c. Resistance  
d. Power  
e. Quantity of electrons flowing in a circuit.

17. An interrupted carrier wave is considered to be which type of emission?  
a. RTTY  
b. SSB  
c. CW  
d. TV  
e. CW/Al

18. How is the approximate total length of a half wavelength dipole antenna calculated in feet?  
a. 468 divided by the frequency in megahertz.  
b. 468 divided by the square root of the frequency.  
c. The product of the frequency and power, divided by the speed of light.  
d. The speed of light divided by the operating frequency.  
e. The frequency in megahertz divided by 21.695.

19. What is coaxial cable?  
a. Shielded cable for the transmission of radio waves.  
b. Unshielded cable for the transmission of radio waves.  
c. Unshielded cable for the transmission of AC currents and radio waves.  
d. Shielded cable for the transmission of radio waves.  
e. Shielded cable for the transmission of AC currents and radio waves.

20. Draw a block diagram for a typical Novice station including a transmitter, an SWR meter, an antenna tuner, an antenna feedline and an antenna.

CORRECT ANSWERS


LISTEN TO WORLD from p.17

with reviews of new radios, antennas and related listening accessories, and various club guests are heard every week about their activities. This program has been going strong ever since it came on the air back in 1971. Its founder and host, Ian McFarland, has done an excellent job in putting it together and sustaining its popularity. Listen to it on Saturdays at 2130-2200 UTC on 11.945, 15.150, 15.325, 17.820, 17.875 or 21.695.

On Sundays at 1900-2000 GMT you can hear this program on 5.995 7.285 15.325 17.875 and 21.695. If you are home at 1900 hours on Tuesdays you can pick it up on the same frequencies as given for Saturdays.

SWL Digest is not the only American program that comes down from the land of the maple leaf. Most of the others are put out during the weekends, however. During the week the regular broadcasts to North America are primarily news, weather and sports results. These are heard at 0100-0130 on 5.960 and 9.755 MHz; also at 0200-0300 on the same frequencies. The latter time gives you the well-known "As It Happens" news broadcasts which are aired on the local CBC network at the same time. Also, after April 30, you can hear "As It Happens" from 0000-0100. Same frequencies are given above.

On Saturdays at 1800-1900, listen to "Canada a la Carte" on 15.260 MHz and 17.820 MHz. Here Ian McFarland and Bob Cadman bring you an informal blend of conversation, features and reports about many different aspects of life in Canada. You can also hear "On Your Cocks" program, "Spotlight on Science" and "Things That Happen" to the North Country!"
Start Your Own Club by Lawrence I. Cotariu

FORMATION

So, you're an avid shortwave listener and want to organize a club. You want to use your knowledge of SWLing and have always been an organizer.

The concept seems clear in your mind: I'll call the group - Radio International, have people around the world belong to it, sell equipment, and we'll even have conventions.

But now, that is what we Americans call "shooting for the moon" - setting your sights high. But, after all, you might want to begin with a smaller scheme; expand later.

Try obtaining members in your own area first. But how will you get them?

To begin with, put notices on bulletin boards around your vicinity and run classified ads in your town newspaper. Don't expect hundreds of people responding to a notice that a shortwave listening club is being formed. You may get 10 to 20 replies or more in this way, depending upon the size of your community.

You may be in a better position to start a group at a local community center, church, temple or even at school. In that case you must contact an official of the facility and talk up your interest. Once permission is given, you have the full resources of the center to obtain membership.

Do we want formal sessions or can and just have informal conversations? Most clubs have a club name and members nominate and vote for officials. If a formal organization is appealing you will need a president to conduct club meetings, a vice-president to be available in case the leader cannot function in his post, a treasurer to handle any money and do light bookkeeping, and a secretary to record the minutes of each meeting. These are basic positions to organization structure. Others can be selected as the need arises, such as sergeant-at-arms to control unruly people.

I was a "heysydownder" in a club. Everyone knew I wanted to be president, and as I was told: Whenever the National Anthem was announced and people were standing, I was to yell out, "Hey! Sit down der!"

MEETINGS

The first order of business is to decide on a location for your gang to meet. This may not be necessary if your organization is spread out throughout the country or it spans the oceans.

If your meetings will be attended by members, you might want to consider holding them in a member's own apartment or home would make a good place to begin with. Another member's home or a restaurant, if one exists, is a good place also.

A small group can meet at a local restaurant, "Waveland," pub, recreational center, etc.

Decide on a date, place, and time to hold your organizational meeting. Notify the people who inquired about your club.

At the first gathering, the group can determine the way the club will be run. Who do we charge dues? Have officers? What will we talk about? How often should we meet? Can we have a club bulletin?

The traditional way of conducting meetings varies throughout the world. In the United States the leader calls the session to order, then spends the minutes of what happened at the previous gathering. Then the leader inquires if anyone has any need to discuss old business. The new subjects are brought up by those in attendance.

The meeting usually has a time limit as dictated by how long the meeting room is available. A limit can be decided by the group. After business has transpired, the formal session closes and the participants can socialize.

Gatherings may only be for the club officers. Maybe there will be no meetings because the club consists of a membership list, bulletins, and personal correspondence.

A session can even be a periodic convention to give members from all parts of the world a chance to come together.

Members might be interested in making trips to an international broadcaster to see its operation. Many electronic companies might do business with the club if you purchase a quantity of the same product and you could save money for the membership. Recruiting new members is important, especially in its growing stage. Bring in people with new personalities and ideas to contribute. Word of mouth is when a loyal member tells his friends about the group and the friends tell other friends.

The same resources used to get the original members must be continually utilized.

Now that your organization is established, it is building a reputation. Naturally, a good positive image has to be presented to members and non-members; this is known as "good press" or "positive public relations."

Many shortwave broadcasters have segments that highlight your club, commonly called DX programs. You can reach potential members already interested with the hobby. An announcement over the air will be heard on many continents. If members are wanted in specific regions specify that in your letter. The station's announcement is usually the word for word what you write.

To attract people in general, utilize bulletin boards, news publications of the club, etc. Try getting publicity in the mass media. Have an officer of the club send a press release to the news media on your members list and on world hot spots or on a member who keeps in touch with his own country.

For publicity, you might consider appointing a talented public relations director or form a committee to handle this.

It is very important to have a system to handle incoming inquiries from non-members. Too often, a club just does not bother doing this. By ignoring letters you might be losing new members.

If you have any questions, write me at: 8041 N. Hamlin Ave., Skokie, IL 60076, U.S.A. Include a stamped self-addressed envelope (US) or the proper IRCs (Foreign).
STOCK EXCHANGE

PERSONAL

NOTE: Monitoring Times assumes no responsibility for misrepresented merchandise.

SUBSCRIBER RATES: $1.10 per month, paid in advance. All merchandise must be non-commercial and radio-related. Ads for Stock Exchange must be received 45 days prior to publication date.

WANTED: Any BACK ISSUES of MT prior to March, 1984; would like to trade for exchange frequencies in SOUTHEASTERN U.S. write: C. H. Hooper, 3151 Waters Road W., Ann Arbor, MI 48103; (313) 666-4167.

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WANTED: FOR SALE: TWO M200 Morse Code and RTTY Terminal Unit. I will ship. $22.50 Cash. Contact: Cliff Ford, HBB 1-187A, APO NY 09178.

FOR SALE: YAESSF FRG-7000 communications receiver 0.25 MHz to 30 MHz, $250 plus postage. Call Ron Clark at 412-523-5070 evenings.

FOR SALE: REALISTIC DX-302 Receiver. Relisted this month, manual and schematics included. $275.00.

FOR SALE: C29685 SR-278/GR 225-399.9 MHz UHF aircraft receiver, 115 VAC $100.00. 380/639 VHF aircraft receiver with speaker, power supply included. Excellent condition $100.00. You pay shipping. David Bonham, 2816 River Rd., Millville, NJ 08332.

AAA ROY ROY-ASCII Reader with powersupply and switch. Will ship. $160.00 or trade for Bearcat 100. Jeff (714) 289-6118.

BEARCAT 100. Excellent condition, NIB. $95.00 or best offer. Great for contesting. Jack, W8GJW.

BEARCAT 100. Excellent condition. NIB. $95.00 or best offer. Great for contesting. Jack, W8GJW.

BEARCAT 300 Scanner. Excellent condition. All accessories. $285 ppd. Comment to: Colelaur Clarke, 1401 Blair Mill Road #170, Silver Spring, MD 20910.

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FOR SALE: INTEGRAPH M200 RTTY/Morse ASCII demodulator, new with warranty and free FM modulator for TV hookup. Retail $495; one only; $425 including shipping.

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GROVE ENTERPRISES

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Braintree, MA 02184


WANTED: Any information on the NY State police such as zone boundaries, codes, assignsments, etc. Also, any pertinent information on NY State's proposed new governor, etc. Freqs & codes. Will swap what information I have on Syracuse and local areas. Christopher Smallman, 10B Third St., Liverpool, NY 13088.

WANTED: Owner's manual for RADIO SHACK Pro 78 VHF 8 channel receiver catalog #20-173; Radio SHACK 4 channel receiver catalog #20-150. Information about a similar radio in San Francisco Bay area. Oakland, CA 94611 (415) 8849-0919.

INFO-MATION PLEASE

MONITORING TIMES WILL PRINT AT NO CHARGE (AS SPACE PERMITS) ANNOUNCEMENTS AND QUESTIONS OF A NON-COMMERCIAL NATURE.

I am willing to share aircraft/frequency information from my DOD/FLIP chart en route if supplements with anyone sending specific frequency listing questions and an SASE. Information includes tower, arrival/departure, radar weather, air/ground, ATIS, dispatch, capsule broadcasts and other frequency information military bases and air fields in US, Canada and Mexico. Philip Hymes, Box 8816, Santa Rosa, CA 95402. (Thanks, Philip. I always nice to see someone interested in sharing his knowledge).

WANTED: Addresses for Shortwave broadcast stations to program, freecast and broadcast schedules. Michael Bennett, 2420 N Center, Bonham, TX 75418.


I am seeking a manual for the NIB Edition 52A/URM-176 or M-20 Radio Interference Field Intensity Meter, 325-400 MHz, manufactured by Stoddart Aircraft Radio Co., Inc. Contact: Steve Sorman, Box 75363, St. Paul, MN 55175.

I am looking for any DXers or SWLs who live outside of America, who might be interested in corresponding by videotape. Local interest is England, W Germany, Holland, France, Switzerland, Austria, Denmark, Sweden, Norway, Greece, Japan, Canada, New Zealand, S Korea, Singapore, Israel, Taiwan, Philippines, Alaska, Nova Scotia and Ireland! Please let me know if you are interested in correspondence. G568; L12A; G3GR; G6AC; 2E0HGD; 2E0GCD. I would be very glad to supply the service! Please! Please! Please! I am interested in being the first DXer to establish a corresponding talk; 14-39 recording from shortwave. Rob Harrington, Box 1364, Littleton, CO 80161.

DIRECTION FINDING information wanted. I want to build or buy an SWL-RDF system for locating unidentified transmitters. My location is far west and north, 120 mi north of Fairbanks, Alaska and should be good for this application. Need to know about practical books, magazine articles, or equipment. (Hobby stack, etc.) Doug Vander Laan, P.O. Box 287, Ft Yukon, AK 99740.


LISITERS LOG FROM P.7

Ch 2
1 257.8 FA/Charlotte, Raleigh, Winston-Salem; Asheville, Fayetteville 2 255.4 FAA**, Hickory, Newi 3 346.6 FAA**, Fayette, Greensboro, Edenton, Winston-Salem 4 386.0 FAA/Raleigh-Durham 5 302.7 NAF Experimental Air Station 6 261.0 Army Pk Bragg 7 289.4 New River 8 307.8 FAA/Hickory 9 363.8 AF/Seymour Johnson 10 246.6 Tactical 11 234.4 Army Pk Bragg 12 243.4 Tactical 13 363.1 Tactical 14 322.3 FAA/Greensboro 15 244.6 Tactical 16 236.6 AF/Pope/Seymour-J 17 237.5 Army/Pk Bragg 18 359.7 N/Cherry Pk 19 304.6 Army/Pk Bragg 20 ?

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