

Cybertek

The Cyberpunk Technical Journal
ISSUE #14 - WINTER/SPRING 1996

Published by OCL/Magnitude, P.O. Box 64, Brewster, NY 10509
with assistance from The International Information Retrieval Guild



SIXTH ANNIVERSARY ISSUE

TECHNOLOGY - ANONYMITY - SELF-DEFENSE

"A people who mean to be their own governors must arm themselves with the power knowledge gives"


- James Madison

Warning

The Surgeon General has determined that reading this periodical may be hazardous to totalitarianism and lead to the following side effects: technophilia, independent thought, self-determination, and libertarianism.

CONTENTS

- ✧ Thoughts From The Interzone
- ✧ Rede For a Departed Brother
- ✧ Hackers Vs. Politicians
by J. Orin Grabbe
- ✧ Monitoring Russian Communications
by Tom Koach
- ✧ Urban Survival, Part II
by Douglas Bell
- ✧ Building a By-Phone
- ✧ Programming the Motorola Radius SP10
by R.F. Burns
- ✧ Hacking On the Highway: An Introduction
by Joshua Tower and The Men From Mongo




**Miracle Printing
& Design, Inc.**

We'll help you print (almost) anything!

MiraclePr@AOL.com
Tel: 803.744.4212
Fax: 803.790.6348

We print business cards, letterhead, envelopes, custom carbonless forms, small publications, buttons, CD covers & booklets, labels, magnets, pencils, really anything that will stand still. Company identity refinement & new logos are a specialty here. Artists & designers are (almost) always here to help. We print and/or publish several zines, send \$10 for a big envelope full of at least 5 recent projects. Hope to hear from you!

64 Federal Road
Danbury, CT 06810



Psychic Self Defense Reports (2) Simple & safe. \$6ea.

Natural Self Defense Report - Awesome secrets. \$10

Please add \$2.50 postage & handling each order. Send \$1 for larger Incredible Inquiry Cat. At Fry 76, Box 2207 Garden Valley, ID 83622

WANTED: Articles for *Cybertek* #15. We are seeking high-quality, practical, how-to articles on technology, security, and self-reliance. Unsolicited manuscripts welcome. Write, or email ticom@connix.com for topics of interest, writers' guidelines, and compensation information, or to submit an article.

Classified Ads: 15 cents/word. 20 word minimum. Contact us for information on display ads.

Cybertek: The Cyberpunk Technical Journal

Publisher/Senior Editor: Thomas Filecco (Thomas Ioom), OCL/Magnitude, P.O. Box 64, Brewster, NY 10509, <ticom@connix.com>

Associate Editor, Administrative Operations: Carol J. Filecco

Writers: Atreides, Nick Halfinger, Wildflower, S.V.M., Jim Teff, Charlie Holmes, Pyronomy, Douglas Bell, oleBuzzard, R.F. Burns, Deprogram, Tom Roach, J. Orlin Grabbe, Joshua Tower, The Men From Mongo

Subscription Information:

Individual Domestic Subscriptions:

Regular: \$15/1 year (4 issues)

1st Class: \$20/year

Sample Issue: \$3

Canadian Subscriptions: \$25/year (U.S. Funds)

Overseas Subscriptions: \$30/year (U.S. Funds)

Corporate Subscriptions: \$80/year

Trades of similar periodicals, interesting (and functional) electronic equipment, office supplies, envelopes, and 32 or 55 cent stamps accepted in lieu of monetary payment.

Free electronic version (*Cybertek Electric*) available on Usenet groups alt.2600, alt.cyberpunk, and alt.ezines, and via email list (email <ticom@connix.com> to subscribe).

Except where otherwise noted, Cybertek is Copyright © 1996 by **Thomas Filecco, OCL/Magnitude**. All Rights Reserved. The information in this periodical is presented for educational purposes only; as unconditionally guaranteed by Article I, Bill of Rights, Constitution of The United States of America. No illegal use is implied or suggested. The opinions stated in the articles are those of the authors, and do not necessarily reflect those of OCL/Magnitude: *Cybertek* or it's administrative and editorial staff.

SURVIVAL ORIENTED BOOKS & Reports. Jam-packed with articles-
Clippings & updates. Low Prices.

Hard Times Survival Manual - Bargain priced expose on elites plans & your options. \$4.

Retire Without Money Report - Little known secrets of getting by for pennies. \$6.

Own A Place In Paradise Report - All nations visa requirements with hidden eden spots. \$4.

Freedom Way - Old live on \$2 a week classic. \$3

Survival Secrets Reports (3) Huge collections. \$9ea

"Less is More" Book - Philosophic revelations. \$12.

"Bargain Paradises Of The World" Book - Classic. \$9.

Whats Ahead Report - Coming disasters outlined. \$4.

South Pacific Paradises Report - Special places&views. \$4

Poor Mans Housing Report - Cheap shelters etc. \$5.

Live on Wheels Report - Vans-Buses & many more. \$5.

U.S. Communities & Retreats Report - Sources-Ideas. \$5.

New Systems Report - Better world systems. \$5.

New Foods Report - Little known crops & foods. \$6.

Strange & Exotic Foods Report - Great variety of bugs.\$5

Farming the Sea Report - Various fish farming Info. etc. \$3.

Soil Secrets Report - Upgrading fertility methods. \$9.

Super Yield Report - Little known secrets-methods. \$9.

Supergrowth Coils Report - to stimulate. Simple des. \$5

Mother Earth Secrets - Esoteric secrets to heal. \$8.

Pole Shift Reports (3) End of century disaster \$6.

Disaster Reports (3) prophetic disasters etc. \$8ea.

Environmental Detoxification Report. Little known info. \$8.

Nuclear Disaster Relief Report - Detox secrets etc. \$8.

Hidden Poisons Reports (3) additives-envir.p. \$7ea

Beverage Dangers Report - Shocking exposes of bev. \$7.

Polarity Treatment Report - Detox foods with them. \$3

Make Water Conditioners Report - Many types-ways. \$5.

Strange & Wonderful Food Alterations Report - Misc. t. \$3

Desalinization Secrets Report - Unique design. \$8.

Free Heat Report - Many unique designs-ideas. \$4.

Pumping Water For Free Report - Strange & unique des. \$4.

Free Cooling Report - Will surprise you by variety. \$4

Burn Methane Report - Also make carb easily. \$9.

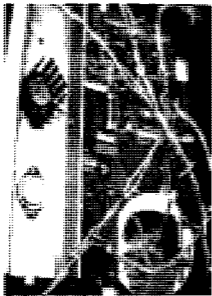
Burn Water Report - Run as steam & mist to carb. \$7

Pedal Power Reports (2) For loads or travel. \$3 ea.

Brainwashing Reports (2) Subliminals etc. etc. \$10ea.

Poor Mans Medicine Report - Treat yourself cheap. \$10

Bug Irradication Without Poisons Report - Surprising. \$6



Thoughts From The Interzone

Another year has passed by into Mugin's realm, and with it the sixth year of Cybertek's existence. Thanks and felicitations to all our brothers and sisters in the scene who've helped us through another year. There are so many of you out there who deserve approbation in this matter, and your deeds will not be forgotten.

At such times, one's mind is full of introspective thoughts clamoring about; as is mine right now. Expressing them to others, however, proves to be a different matter. A lot has happened over the course of the past twelve months; a relatively small amount of time actually. We have lived, loved, lost and gained; navigating a winding, often joyous, and often somber path. In retrospect, most of what I've seen has helped me maintain my faith and keep the darkness at bay.

One thing that stands out was the attitude change in the IIRGNet-based Connecticut hacker scene when our associate editor, Paul "Bleach" Keniry died suddenly last November. The petty infighting and negativity that was occurring at that time stopped, if only for a short while, while we mourned the loss of our friend and brother cyberpunk. I wish that it didn't require the death of one of our own to transcend the differences in the community. It did prove, however, that we are capable of collectively sticking together when the need arises. Now if we can only collectively stick together at other times.

The other noteworthy event, which helped allay my concerns about the direction (or lack thereof) the "underground community" was going, was my introduction to the "younger punk crowd" at Danbury Connecticut's Trash American Style (one of the places where Cybertek is sold off the shelf) and Seattle Espresso. The work they do with their bands, 'zines, and humanitarian events such as the recent benefit that was held at The New Milford Teen Center last March 1st for the Danbury Women's Center (which I unfortunately was unable to attend) deserve the highest levels of encomium, and have a positive effect that reaches farther than I think they realize.

Their work continues with a punk rock benefit for the Food Not Bombs program. Food Not Bombs was created in 1980 as an independent

humanitarian effort aimed at feeding the homeless. Their voluntary efforts have helped millions across the nation over the past 16 years. At the time of this writing, the bands Puncture, Fudge Daddy O's, Kitty Bad-Ass, Alcatolics, Bobby, and Self-Extinction will be performing. The benefit will be held April 13th., 1996 at Danbury's Harambe Youth Center on Main St. For more information and updates call the Trash American Style Info Line at (203)-798-0620. I know Cybertek has a lot of readers in the Connecticut and Southeastern New York area. You all should go and check the show out; as the proceeds will be going to a very worthy cause.

Ω

REDE FOR A DEPARTED BROTHER; PAUL D. "BLEACH" KENIRY, 1979-1995

One who is born upon this dim Middle Earth
Has only a few years to live.
To know the love of family,
The warm embrace of a lover,
And the comradeship of good friends.
To some the years may be long and rich,
To some the years may be all too short.
Yet through it all each does his or her best,
As did Paul do his for us.
So that when finally each does stand before the Gods
It is with pride in self and backed with the loving prayers
Of those known in life.
In time, the others of us are all fated to follow,
There to be reunited with those who have gone before.
To meet again in joy and laughter
In the shining land of the Gods.
Yet know full well that the ancient sagas say
That those who are truly worthy shall be born again.
Returning in time to family, to friends,
And his own folk.
And we here know full well
That our friend is the worthiest of the worthy.
We will meet again, both in the golden lands beyond,
And, in time, here once again.
May his spirit help and guide those who remain,
May his soul find peace and joy
And the best of company.
In the emerald gardens and golden halls
Of high Valhalla.

this system up to a phone line and AC outlet in a utility room, and then go to another room with an AC outlet and have a phone connection. This could even be extended from one building to another provided both buildings were on the same transformer feed. With the electric company bridging transformers for remote meter reading, the range could be longer.

- Prepaid Calling Cards - Currently the safest and best way to make modem calls from a payphone. Since the calls are paid for, there's no toll fraud flag that can come up to trip you later. Most prepaid calling card services don't forward CID information as well; although you will still have to contend with the service's WATS line getting your ANI data if you call it direct.
- Proper attire and demeanor - In many places and instances it's a big help to look and act like you belong there. One should also have a plausible story set straight in advance in case they are questioned.

Some Notes on Payphone Usage

The problems with payphones (whether Bell or COCOT) are that they are difficult to hook a modem up to and interrupt the connection every few minutes in order to tell you that you have to put more money in. The solution is to use your acoustic coupler and a calling card of some sort.

COCOTs usually have a modular jack at the demarc point (standard telco arrangement since the COCOT's wiring is the responsibility of the customer, just like with a residential line), and since they require external power there is usually an AC outlet somewhere nearby as well. DTP a sticker that says "Property of Dingleberry Telecom" (or whatever the name of the COCOT company is) put it on the base unit of a wireless phone jack system, and hook up the base unit to the COCOT's phone line and AC outlet. Find a nice secure place somewhere nearby which has a handy AC outlet off of the same transformer feed. Plug in the extension unit and have fun. Anybody who might notice the little adjunct you've added to the COCOT line will see the official-looking sticker on it and think it was something the company installed.

Ω

~~Classified~~

Hacking / Phreaking / Cracking / Electronics Information / Viruses / Anarchy / Internet information now available by computer disks, books, manuals or membership. Send \$1 for catalog to: SotMESC, Box 573, Long Beach, MS 39560

For complete connectivity, acquire an acoustic coupler for your modem. This device attaches to the handset of any phone and plugs into your modem's RJ-11 jack. It is essential for modemming from payphones; where in most instances you don't have access to a terminal block or phone jack. Two devices of interest are available from Konexx/Unlimited Systems Corp. (<http://www.konexx.com/> for product information). The first is the Model 204 "Konexx Koupler" (\$140). It plugs into the RJ-11 jack of a modem and provides acoustic coupling between the modem and a telephone handset. According to company literature it operates up to 14.4K baud on electronic phones, and up to 2400 baud on payphones and other phones that use a carbon microphone. The second is the Model 305 "Modem Koupler" (\$300). This is a 2400 baud acoustically coupled RS-232 modem. Both units are powered off a 9V battery. Our personal preference is towards the Model 204. It is less expensive overall when bought with a modem (14.4K PCMCIA modems are down to \$130 new. The Info-tel 14.4 POCket is even less..), enables one to communicate at higher speeds than does the Model 305, and offers greater overall versatility.

There are also a few other things that you should also throw into your portahack kit:

- Can wrench or 7/16" nutdriver - The tool that is needed to open up bridging heads, pedestals, demarc points, and other places where you can hook in to receive a dialtone
- RJ-11 to alligator clip adaptor - a/k/a "Beige Box". Go the deluxe route and make one with piercer clips (what lineman test sets are equipped with) so you can also hook into a single pair drop wire if needed.
- Phone cords - You will probably run into many instances where you will be able to use one; so keep 'em handy. We keep a 12 foot modular line cord in our kits for when a conventional hook-up presents itself. Those retractable 50 foot units is very handy for running a line from a phone can to a nearby place of concealment, and takes up little space.
- Leatherman Tool, Gerber Multi-Plier, et. al. - The standard hacker tool. Don't leave home without it.
- Lineman test set or one piece phone with "beige box" adaptor
- Wireless phone jack system - This system appears to have great potential. It costs about \$100 and consists of a base unit and an extension unit. The base unit is plugged into any AC outlet near an existing phone line and connected to the line. The extension unit is plugged into any other outlet and gives you a phone line without the need to run cable. As long as both outlets are on the same transformer feed from the electric company, you should be able to hook

As the tree is green forever,
May Paul's soul live to eternity.



Hackers Versus Politicians

by J. Orlin Grabbe

The December 1995 Media Bypass magazine article, "The Still Before the Storm," by James Norman, details how a group of "Fifth Column" hackers have initiated a campaign to clean up political corruption, resulting so far in the announced retirement of over thirty politicians (who have received packages of information detailing their financial shenanigans). Norman calls this group "CIA computer hackers", though in fact the group is * totally outside government.* (One member is ex-NSA, an agency that member now despises, and another member is ex-CIA.) But, anyway, as Norman notes:

"...the Fifth Column has managed to penetrate Swiss and other foreign banks to quietly withdraw what is now an astounding \$2.5 billion in illicit money from coded accounts they have identified as belonging to government figures.

"Starting in 1991, this five-man Fifth Column team has been using its own Cray supercomputer to break into foreign bank computers, download vast libraries of data and trace this money to a wide range of illegal activities, from kickbacks on drug and arms deals to insider trading profits, software piracy and the sale of state secrets. Oh yes, don't forget tax evasion."

What I like about the Fifth Column campaign is that it simply asks politicians to live by their own rules. If they want to launder money themselves, then they should get rid of the money-laundering statutes and let the rest of us have the same privileges. If they don't want to pay taxes, then let them get rid of the tax laws. If they want to continue the insane "war on drugs," then they shouldn't be taking payoffs from drug lords. (It is amazing how non-authoritarian people become if forced to practice what they preach.)

This article is an introduction to the political possibilities of hacking. It will present a brief how-to for the enterprising hacker to (legally) prepare his or her own background report on any given politician (sorry, Senator Exxon has already received an envelope). Let's face it: journalists are too technically incompetent to do the job.

Politicians are those annoying people who--drink in hand--can stare at a unencoded file for hours, fall into a sexual reverie involving ASCII entities, and

then weave their way to the nearest TV camera to pontificate about pornography on the Internet.

But, you ask, if they are so dumb, why are they so rich? Sometimes the latter *is* a mystery, reminiscent of the miracle of the loaves and the fishes.

Take the case of a man who can hardly pay his bills, but who gets elected to national political office and goes off to Washington for a few years. Then--lo and behold!--on his simple politician's salary, he suddenly manages to maintain two fine homes, one inside the beltway in Chevy Chase and another in his home town community of Rat's Ass, to purchase new cars for his wife and himself, to accumulate lakefront property in a neighboring county, and to stash away a nice sum of cash in a foreign bank account.

If the "simple politician's salary" bit sounds improbable, it probably is. Let's face it: many politicians are on the take. They may have hidden sources of income involving illegal payoffs from corporations, lobbying groups, or individuals. Are you a student? Then you will be proud to know that educational commissions and associations are also a hot new conduit for political bribes.

This article suggests a few basic procedures for finding out whether that special politician you have in mind is getting more on the side than ASCII sex. Honest politicians, of course, will have nothing to fear from any of the following.

Is what I am about to do legal? you ask. Of course it is. To reassure yourself, pull out your world-wide web browser and take a peak at one of the many data service companies, say Insights, Inc. (located at <<http://isis.iah.com/insights/background/>>). They promise, using only an individual or business name and/or address, to provide sufficient information for:

- *Preparing Due Diligence Reports
- *Locating People or Businesses
- *Exposing and Controlling Fraud
- *Uncovering & Verifying Background Information
- *Identifying and Verifying Assets

How do they get away with this? Simple. They legally search public records. Much of this public-record information is computerized, although some of it is not. In any event, I do not advocate illegal or questionable access methods, or the breaking of any laws. Checking up on the (possibly criminal) politician of your choice doesn't have to be a crime.



The Men From Mongo at their last reunion.

The idea is to hack on the highway (the government listed for those of you who've read too much Wired). This isn't as difficult as you might think, and doesn't require you to spend \$2000 on a new laptop. Yes, you're going to have to spend some money, but not that much. If you don't have a job we suggest you get off your ass and find something to bring in some cash. Besides, the authorities tend to look at you in a slightly better light if it looks like you're a responsible member of society, especially if you're a "good responsible kid who works after school." This we know from experience.

The main items that are required are a laptop or similar portable system and a modem. A brand-new state-of-the-art laptop can cost upwards of \$2000 depending on what you buy, but you don't need state-of-the-art for portahacking. All you really need is something that you can hook a modem to, run terminal software, and do a little data storage. One can find older laptops for under \$100 in the classified ad sections of newspapers and in the Pennysaver, Bargain News, or whatever the ad paper is called in your locale. Hamfests and computer shows are also a good source. One of us saw an 8088 laptop at one for \$15. Just make sure the unit either has an internal modem (even a 1200 will do for most hacking purposes) or has an RS-232 or PCMCIA port to add an external modem. If you're going the external RS-232 modem route, the modem will need to be able to run off batteries. So called "pocket modems" are available which are a little larger than a pack of cigarettes and run off a 9V battery. The least expensive we've seen is the Info-Tel 14.4 Pocket Modem; for \$99 from Midwest Micro (1-800-367-8080).

To program the radio, remove the battery compartment cover, battery, and plastic cover underneath the battery. On the bottom right hand side of the radio you will see four dip switches. The position of the dip switches is what determines the operating frequency. Use the table below to determine what dip switch settings pertain to what frequency, where 0=ON and 1=OFF.

Frequency	Switches	Frequency	Switches
151.625	0011	151.655	1000
151.685	0101	151.715	1010
151.775	1001	151.805	0110
151.835	0010	151.895	1101
151.925	0001	151.955	1100
154.490	1011	154.515	0111
154.540	1110	154.570	1111
154.600	0000	158.400	0100

If someone wanted an "on the fly" programmable radio, they could bring a fourbit dip switch up to the case of the radio, and be able to switch between the 16 different frequencies without having to dismantle the radio every time they wanted to change frequencies. There's plenty of space inside the radio for an aspiring RF hacker to do a little experimentation, and Motorola's gear has a reputation of being very workable, hacker-wise.

Ω

Hacking On the Highway: An Introduction by Joshua Tower and The Men From Mongo

Caller ID, ANI, DNRs, AMA, data taps, and ignorantly conceived totalitarian legislation has made the art of hacking much more dangerous than it was only a few years ago. Back in the days of (the old YIPL originated) TAP magazine, Fred Steinbeck wrote "The Ten Commandments of Phone Phreaking"; the first of which was (paraphrased) "Do nothing over any phone traceable to you." This should be common sense to anyone who hasn't just crawled out from under a rock. Yet, we see so many dumb shits out there who continue to hack over their home phone lines. If you are one of these people, you are an idiot and probably deserve to get caught. While we call BBSes and occasionally get a conference call into our lines from some LLs out on the Left Coast, We pay our hefty phone bills on time every month and do nothing illegal on the line. They can DNR it all year long. All they'll find out is that Josh only calls his parents once a week and that we order a lot of Chinese take-out.

Still not convinced? Hop over to Infonet <<http://www.infi.net/~dgs.assoc/locator/bgrndnfo.html>>, which for a fee will mine public records for nuggets like:

***Felony and Misdemeanor Criminal Filings--**"Search any court in the nation for a seven year history of criminal filings and possible convictions." (Many politicians wait until they reach office to work on this part of their resume, but some are early starters.)

***Driving Histories--**"Search a three to seven year history of an individuals driving performance, including tickets and accidents." (So you don't really care if your politician speeds a little now and then. But, on the other hand, did that official who helped him get out of a DWI expect a quid pro quo?)

***Upper and Lower Court Civil Filings--**"Obtain a civil litigation history of any individual in any court in the United States." (Is there some hidden reason this guy is getting sued all the time?)

***Social Security Number Tracking--**"Access all three credit bureaus to verify the user of a social security number and the addresses being used." (Having your politician's social security number is the next best thing to having his Swiss bank account number.)

***Professional Licensing--**"Verify the existence and status of an entity's license in a specific practice area, such as private investigation, medicine, real estate and more." (Was your politician really a world-renowned physicist before returning home to run for mayor of Rat's Ass?)

***Consumer and Business Credit Reports--**"Review account balances, credit terms and payment histories for an individual or business." ("So, before he went to Washington, he couldn't pay his bills . . .")

Well, if they can do it, so can you.

So where do you start? Well, first see what the politician him/herself has to say about the money flows. Federal law (5 USC app. 6, section 101 et seq.) requires members of Congress to file ***Financial Disclosure Statements*** yearly. The Financial Disclosure form has nine parts:

- Schedule I: Earned Income
- Schedule II: Payments in Lieu of Honoraria Made to Charity
- Schedule III: Assets and "Unearned Income"
- Schedule IV: Transactions.
- Schedule V: Liabilities
- Schedule VI: Gifts

Schedule VII: Fact-Finding, Substantial Participation, and Other Travel

Schedule VIII: Positions

Schedule IX: Agreements

Want to see Newt Gingrich's personal finances for the year 1993? Direct your web browser to <<http://www.cais.com/newtwatch/93sei.html>>.

Many state, county, and city elections have similar requirements, either on a personal or a campaign basis. Want to see a copy of the *Candidate Campaign Statement-Long Form-Form 490* for Joel Ventresca, candidate for Mayor of San Francisco? Visit Campaign Net at <<http://tmx.com/sfvote>>.

These statements represent what a politician says he or she has or gets. But the really interesting items--like those kickbacks from the Cali cartel--not surprisingly go unreported. To get the good stuff, you will need your full hacker armor.

The first thing to get is your politician's *social security number (SSN)*. It's not difficult. Your politician loves to be photographed doing his/her civic duty of voting. Which means he or she fills out a *voter's registration card* (public information) which will contain said politician's name, address, date of birth, party affiliation, and--usually--social security number. Voter files may be obtained at your politician's local county court house, as well as on many on-line data bases. A person's SSN is the common key that links together many commercial and government data bases.

Can't find the SSN number on the voter's registration card? Then try *DMV* records. The insurance lobby has made sure that driver's records are easy to get, along with the details of any accidents, and critical driver information such as height, color of eyes, address--and social security number, if the latter was required information on the form. (California won't give out addresses, if a request has been filed not to do so--the "movie star" exemption.) In about 20 states the individual's social security number is the driver's license number.

Still searching? Then go with the triple whammy of the major credit bureaus--TRW, TransUnion, and CBI/Equifax. The Fair Credit Reporting Act essentially implies you must be contemplating a business relationship--such as selling a car, renting an apartment, giving a loan, or attempting to collect on a judgment--with a party to request his credit report. But the *header* information in the file--such as social security number, date of birth, address, and spouse's name--is legally available to anyone, and your inquiry (unlike an actual credit report) will leave no footprints. The addresses and phone numbers are:

and make sure the switch is in the open/"off"/"monitor" position. Turn on the RS portable listener and adjust the volume to a comfortable level.

You should hear the background noise of an on-hook phone line and possibly even some crosstalk from your neighbors if the lines are in bad enough shape. When someone picks up a phone on that line you'll hear a dialtone, the dialed digits (pulse or tone), and any conversation. When the phone line rings, the by-phone will ring (assuming your old K500 doesn't have a party line ringer which looks for a frequency other than the standard "B" freq. of 20 hz.), and you'll hear the ringing signal (a 20 hz. tone) and if the line is so equipped the Caller ID data sent between the first and second rings.

If you want to record off the line with this setup, unplug the suction cup mic from the amplified speaker and plug it into the mic input of a tape recorder, preferably one with VOX.

I'm looking through the Radio Shack Catalog and the cheapest phone I see is \$19.95. You can get one for even less from a discount department store, but the quality leaves something to be desired. The last K500 I picked up at a tag sale for \$5. It was made in 1956, built like a tank, refurbished by Ma Bell in 1971, is still going strong today, and will probably be used by my grand children when they get into phreaking (assuming local loops still exist by then). For an extra \$10 it becomes a piece of telecom test and TSCM equipment that would normally cost three times as much for a device with the same functions.

If you're into tech you absolutely must check out your local tag sales and flea markets (not to mention hamfests). You'd be amazed at all the neat stuff you can buy cheap and kit bash for new and different interesting purposes.

Ω

Programming the Motorola Radius SP10 by R.F. Burns

The SP10 is a 1 watt handheld radio transceiver designed to operate on one of 16 different frequencies assigned to low power/itinerant communications in the VHF-hi business band (150.775-174 Mhz.). While this is one of Motorola's "low end" radios, the quality is still up to Motorola's excellent standards. The SP10 is commonly available; even being sold by Radio Shack, and a preliminary inspection indicates that the unit should offer many opportunities to the RF hacker. A full review of the SP10 appears in the February 1996 issue of Popular Communications magazine.

Building a By-Phone

by Thomas Icom/IRG/Cybertek

I first saw mention of the by-phone in *The Anarchist Cookbook*. According to Powell, the by-phone was a phone that was modified so as to be able to be placed undetected on a target phone line for surveillance purposes. In other words, a less portable version of a lineman's test (butt) set in monitor mode.

Personally I find this device to be of limited use for serious surveillance, but it's had other useful applications. It can be placed on a phone line and used to monitor the background "noise" on a phone line. You can often pick up crosstalk from the neighborhood with it (depending on the condition of your local outside plant), and it does a good job of detecting someone playing with your line (as in someone "beige boxing"). I used it to monitor the line on my VMB system, and then pick up if a call was received to my box. It's also handy for when someone places you on hold for long periods of time and you don't want to be attached to the phone for said period.

All that is required is an old Western Electric K500 rotary desk phone, and SPST switch, and a Radio Shack 43-231 "portable listener". A Western Electric K500 can be had at tag sales and flea markets for \$1-\$5 if you don't have one in your basement or garage.

Open up the K500. With the dial facing you will notice the network box towards the right rear of the phone. Locate the "F" terminal. There should be a legend on the network box which will tell where the terminal is located. On my phone which has a 425B network box (dated 10-561), the "F" terminal is on the far left, second down.

Attached to the "F" terminal should be two wires; one going to the ringer and one going to the dial. Remove the wire going to the dial and install the SPST switch between the wire and the "F" terminal. It should look something like this:

```
      /           wire  
F---O O----- to dial
```

You've now just converted your old Western Electric K500 to a by-phone. When the switch is in the open/"off" position your phone will act like a lineman's test set in "monitor" mode. When the switch is in the closed/"on" position it will be just like a normal phone.

Now take your Radio Shack portable listener, and attach the suction cup microphone to the earpiece of the phone. Plug in the phone, take it off hook,

TRW
660 N. Central Expressway, Exit 28
Allen, TX 75002
Automated phone: 800-392-1122
Phone: 800-422-4879

CBI/Equifax
5505 Peachtree Dunwoody, #600
Atlanta, GA 30374-0241.
Automated phone: 800-685-1111
Phone: 800-685-5000

Trans Union
P.O.Box 7000
North Olmsted OH 44070-7000
Automated phone: 800-851-2674
Phone: (714) 738-3800, ext. 6450

Are you a hacker-journalist? Then take a peak at the National Institute for Computer-Assisted Reporting (NICAR; located at <<http://www.nicar.org/>>). Their bylaws prohibit them from selling data to nonjournalists (not that you want to *buy* data anyway--we're just exploring *possibilities*). But data is "sold at or below costs to journalism organizations or individuals for legitimate journalism uses only." (Doing your civic duty to keep tabs on your politician is, naturally, a legitimate journalistic use of the data.) Their data bases include these publicly-available information sets, among others:

Organization: Government Services Agency
Databases: Federal Procurement Contracts for 1992-1994.

Organization: Federal Election Commission
Databases: Campaign Contributions for the 1991-1994 election cycle.

Organization: Federal Reserve Board
Databases: home mortgage loans covered by Home Mortgage Disclosure Act (for 1992-1994)

Organization: Federal Aviation Administration
Databases: Service Difficulty Reports, Airman Directory, Aircraft Registry

Organization: Federal Bureau of Investigation
Databases: Uniform Crime Reports

Organization: Alcohol, Tobacco and Firearms
Databases: Gun Dealer Licenses

The existence of such data immediately brings to mind a barrage of possibly relevant questions:

Is there an incestuous relationship between the donors to your politician's campaign and subsequent federal government contracts? (It always starts somewhere . . .) To find out, compare federal procurement data with campaign contributions. Campaign contribution data from the Federal Election Commission are supposed to include all contributions by individuals and political action groups (PACs) to a politician's federal election campaign. The Government Services Agency, meanwhile, keeps Individual Contract Action Reports (ICARs), which has information about the federal agency granting a government contract, the identity of the contractor, and the contract dollar amount.

Has your politician recently purchased a new home? What is its value? What was the down payment? Is he or she living suspiciously beyond his or her means? What is your politician's race or gender (DNA sequence)? To start to answer these questions, look at home mortgage data. The Federal Reserve Board started keeping data like this in order to check on "fair" lending practices. So the Fed began tracking home and home-improvement loans, as well as bank-purchased loans. (And just to help the enterprising hacker, when your politician is buying, or possibly refinancing, a house, most banks will now ask for his Social Security Number on the Deed of Trust, especially as the Federal National Mortgage Association now requires it.)

Does your politician own an aircraft? What's its value? Did he purchase it with cash? Check the FAA's aircraft records.

Does your politician own a gun even while advocating gun control? If he bought the gun from a dealer, ATF records can help out here.

And so on.

Now let's get to the nitty-gritty: *city, county, and state records*. The *City Clerk* in your politician's home town will have a list of business licenses (name, address, date) and building permits (name, address, cost of construction). The *County Clerk* or *County Recorder* should have liens on file (lien holder, payment agreements), a Probate Index (estate settlements), records of lawsuits and judgments, powers of attorney with respect to real estate, records of mortgages on personal property, and bankruptcy papers. Here you can find out not only the value of your politician's property, but also the names, addresses, and property values of everyone who lives on his street. *City and County Courts* will also maintain a Civil Index (civil actions, plaintiffs and defendants, as well as civil files: description of any disputed property or

Another item that is often overlooked or not fully explained are medical items and medicines. Some books or articles simply tell you to talk to your doctor and explain what you want and get prescriptions for the needed items. I don't know what kind of doctors these people have been dealing with, but none that I have talked to were willing to consider it, or even talk about the subject or need.

This leaves you with the supermarket and drug store items or buying veterinarian supplies, neither of which is ideal. However if you are able to get to Mexico, you can buy prescription drugs across the counter, and many non-narcotic drugs are readily available. For narcotic drugs, simply see your local drug dealer.

The medical "tools of the trade" normally recommended here are either so basic you would be hard pressed to do general first aid, or more than you will ever need or could use, and often are more than most survivalists would know how to use. This is not to say you shouldn't have anything your little heart desires, but don't waste money on an item you have no idea of how to use, at least until you have the other needed survival supplies like food and ammunition stored. For a basic first aid/medical kit it might be wise to get one of the better commercial first aid kits and then one of the more advanced "field medical kits" that includes scissors, hemostats, etc.

Do you have a good set of tools needed to rebuild you home? If not you might consider getting a basic set of hand tools, as any power produced may be needed for other than running your power shop tools. The "Craftsman" line of tools from Sears is warranted for life and many people feel they are among the best, especially in their price range.

While I didn't mention it in the first article, you will need a set of gun cleaning kits. First off you should get a set of one piece stainless steel cleaning rods in .22 and .30 caliber about 30" long and a shotgun cleaning kit as well, such as the "universal" cleaning kits offered by many firms such as Outers, Hoppe's, or Klean-Bore.

After that get a good supply of bore cleaning solvent, either commercial or military, as well as lubricating oil. One advantage of military bore solvents is that they are designed to be used with corrosive ammunition, and are generally much cheaper than commercial solvents. No matter what type of bore solvent and lubricating oil you get, get plenty! Any you don't use would be snapped up by other survivalists who either didn't get any or get enough.

often. After all no one wants to read about toilets and guns in the same article. It brings the idea home a little closer than most of us want to admit to.

For the urban survivalist this is more pressing than for their rural counterparts, simply because the urban survivalist will (generally) not have the room to build an outhouse or some way to easily dispose of the waste. Sure you can get a chemical toilet, but what happens when you run out of plastic bags and chemicals? You should think about getting a composting toilet or some other form of an alternate disposal unit. For more about sanitation and alternate forms of doing things, I recommend you go down to your local library or magazine rack and get Garbage (435 Ninth St., Brooklyn, NY 11215-9937, bi-monthly, \$21.00 a year), or write the following for catalogs: Bay Conservation Systems, Inc., POB 67, Wicomico Church, VA 22579, and Real Goods Trading Co., 966 Mazzone St., Ukiah, CA 95482.

Another useful idea is the use of camouflage. No I don't mean you should be running around in a set of "cammies", I mean the art of hiding yourself or home so that they would be overlooked by someone looking for someone or something to attack.

After "the day", there probably will not be many homes with a fresh coat of paint or that are all neatly kept, so yours shouldn't be either. Also a beaten path to your door just might lead the world to it. The less inviting or lived in a place looks the less likely someone will want to check it out.

Also your garden need not be in neat rows or even in normal garden plants, as there are many plants that most people would not even recognize as food plants, that are easily grown. Look into getting an indoor green house or have pots of food plants inside.

A source of energy (light or heat) was touched on briefly in the first article, with a wood burning stove or camping stove, but sooner or later you will want or need more than that. But what could you use?

How about setting up your own still? No you aren't going to drink the stuff, you are going to use it to run the camp stove, or with slight modification, to run the gas engine on your generator or other power tools. Alcohol can be made from almost any plant matter from grass to pine needles, so as long as vegetation grows you should be able to get some sort of alcohol. Wind power or solar panels would also be possibilities, as would water power; although a full scale water power plant that would provide enough power to be of any great use by itself would be more than most would be able to manage, at least at first. However, this still leaves solar and wind, two items that can be used with a minimum of resources or material.

valuables), a Criminal Index (criminal cases in Superior Court, as well as criminal files), and voter's registration files.

The *county tax collector* will have a description of any property owned, as well as taxes paid on real estate and personal property. The *county assessor* may also have maps and photos, or even blueprints showing the location of your politician's hot tub. The *Secretary of State* will have corporation files and possibly annual reports of your politician's company.

Okay, let's go over it again, taking it slow. With your politician's social security number in hand, you can get header information from the major credit bureaus. This will give you a seven to ten year history of addresses, as well any spousal name or names. The latter is very important, since your average politician's instinct will be to keep questionable sums of money and suspect personal assets in the name of his or her spouse, sibling, business associate, or girlfriend.

Next you go to the state Department of Motor Vehicles, to find out your politician's tastes in cars, trucks, motorcycles, boats, trailers, and recreational vehicles. Of course if your politician leases any of the above, he or she will not show up as the vehicle owner. So the next thing to do is to run the license plate number of that Caddy parked out front, since this will give you the name of both lessee and lessor.

Next you talk to someone who does business with your politician, and who thus has a permissible reason under the Fair Credit Reporting Act to run a credit check. This will give you a listing of all your politician's credit accounts, current balances, payment history, and payment terms. Any bankruptcies in the last ten years, or liens or judgments in the last seven years, will be listed. Did your politician suddenly receive a huge campaign contribution from some source, soon after your politician found himself stuck with a quarter million dollar judgment against him? If so, he won't be the first person who has sold out his country to pay off a personal financial debt.

What property does your politician own? The offices of County Recorder and County Tax Assessor will give you the land value, improvement value, and total assessed values for any property. They will frequently have also the amounts received for any sales, the sale dates, as well as information on the mortgage-holder or other lender. Did your politician get a large loan from Washoe International State Bank just about the time Washoe International State Bank was having trouble with state banking regulators, who are overseen by a legislative committee on which your politician sits?

Does your politician own a business of any consequential size? Then run a business credit check. Who are (were) your politician's business associates?

Who are the company officers and principals? Or—if as is commonly the case—your politician is a lawyer, who are the law partners? Look also for bankruptcies, tax liens, public records filings, judgments, and UCC (Uniform Commercial Code) financing statements. These documents may turn out to be filled with all sorts of unexpected names, dates, and activities.

On what honorary commissions does your politician serve? Do the commission's audited financial statements show any payments for services not rendered? This was apparently what New York Attorney General Dennis Vacco was wondering, when he noted, on January 9, 1996, in a letter to the National Center on Education and the Economy: "Statement 11 on your 1990 Federal 990 and Note 5 on your 1990 audited financial statements indicate that the Center had retained the services of Hillary Rodham Clinton, a member of the Rose Law firm, to direct your Workforce Skills Program while she also served as a member of the Center's Board of Trustees. Statement 11 of the 1990 filing indicates that Mrs. Clinton received \$23,000 for unspecified services. The 1990 filing also refers to a second contract, which was reported to be in the amount of \$150,000 covering the period February 1, 1991 through January 31, 1992, and a similar statement appears on Statement 11 attached to the 1991 Federal 990."

Moreover, did either Hillary Clinton or the Rose Law firm pay taxes on the sums received? (A little birdie tells me neither one did.)

The office of the Secretary of State in any of the 50 states can be a source of UCC searches. UCC Indices will show whether your politician is listed as either a debtor or secured party. (Okay. So your politician is up to his neck in debt to Jackson Stephens. That doesn't mean he listens to a word of political advice Stephens gives him. No way.)

Superior Courts, Federal Bankruptcy Courts, Small Claims Courts, and city, county, and state tax authorities keep records of tax liens, court judgments, and bankruptcy filings. These reveal not only outstanding financial obligations, but also personal and company affiliations, partners, subsidiaries, and dependents. (Is there a Don Lasater or Don Tyson in your politician's background?)

Does your politician really have those degrees he claims? Call the college registrar. Despite what you think, many politicians don't believe in their own "self-made man" rhetoric, and will enhance their resumes with unearned degrees. This in itself may only be a venal sin, but someone who records falsehoods in this area will likely also lie in others.

Has your politician been in the news? Check your library's newspaper file, along with reader's guides, and other news indexes. On the Internet, you can quickly search for your politician's name among the 8 billion words on 16

What do you do with the messages you intercept? I study them, and find I slowly understand more and more of what they have to say. You might soon become an expert in knowing how many fish the Russians are catching. The names of Soviet ships once associated with the Soviet Academy of Sciences are preceded by "NIS" in the address portion of the message.

You also might keep a data base of information related to a specific ship. Who are the crew members who send messages? What is the ship Captain's name (usually prefaced by "KMD")? Is there a sudden increase in KRIPTOGRAMMA messages? As you examine the traffic day after day you will come up with ideas of your own.

There are numerous books available that you might find valuable if you are seriously considering monitoring the Russians. I have written an in depth book titled The Hobbyist's Guide to COMINT Collection and Analysis. It is available for \$26 in the CO NUS and \$28 for foreign orders. Send orders to:

Tom Roach
1330 Copper Peak Lane
San Jose, CA 95120-4271

You also may enjoy "The American Black Chamber" by Herbert Yardley and "The Codebreakers" by Herman Kahn.



Urban Survival, Part II by Douglas P. Bell

Now that you have decided where you are going to weather out the coming bad times, in your house or apartment, what you are going to eat, the years' worth (or more!) of food you have stored, and what you are going to defend yourself with, your urban weapons cache, now what? What else is there?

Well how about sanitation and hygiene! What are you going to do when you can't flush your toilet? Do you have any soap or toilet paper stored away? Dish washing soap, laundry detergent, shampoo, hand soap, anything? What about toothbrushes and toothpaste? How about flyswatters, bug repellent or screens and netting?

The epidemics that ran over much of Europe in the Middle Ages, and most war zones even today, are because of the improper disposal of human waste and/or the improper handling of food, but how many times do you hear about it? Not

["UPTZH" (code 3) equates to a call sign in English (code 2) of "UPTV" which the ITU listing reveals as belonging to the Severo'uralsk. She is being called by "UKA", a Vladivostok coastal station that sends traffic to Soviet fishing vessels.

This might be followed by:

SR VLADIVOSTOK 7093/1895 245 9/6 1400=

[This header reveals the message as coming from Vladivostok. It is numbered "7093/1895" has 245 groups and was transmitted on "9/6" or the 9th of June at 1400 (Moscow Time).]

SR0CHNAYA KRIPTOGRAMMA [Immediate precedence
KRIPTOGRAMMA]

3 PUNKTA

PB SUZDAL'
PB SEVEROURALSK
PB SUKHONA

OT MALAKHITA 108 =

The above is the address list and goes to three Soviet fishing vessels: Suzdal', Severouralsk, and Sukhona. I don't know what the "OT MALAKHITA 108=" means, except that OT is "from" and MALAKHITA is probably a meaningless name like Sky King in our SAC messages. Then the message which might start something like this:

DDDDD AAAAA AAAYAYA YAKKKR RREEE EEESHCHSHCH
SHCHSHSHSHTS TSTSDJ IUTKP LJNKHG FNFASH SHCHSHSHKHY
OEKEYU GNNKYA PEVSH4 YUINJK ILIKHY YAKNPT ZHSGMTS
BTSRTOIFG4Z etc., which is encrypted.

I have noted at least three distinct types of KRIPTOGRAMMA messages. The "NA PERFOLENTE" header always appears to be followed a five letter group (if you are in code 2 mode). My reading of Kahn's The Codebreakers makes me think this may be a rotor setting of the sort used by the Nazi Enigma or Japanese Purple code machines. These are variants of the old Hagelin type machines. Aegean Park Press (Box 2837, Laguna Hills, California 92654) sells software for the IBM PC which can be used to break simple rotor machines. In any event who knows what luck you might have trying to decrypt them. Good luck trying to decipher Soviet Kriptogrammas!

million WWW pages, using the new Alta Vista search utility created by Digital Equipment Corporation. You can also do a name or keyword search through all 13,000 Usenet groups. Alta Vista is located at <<http://altavista.digital.com/>>.

Be sure to read Lee Lapin's book *The Whole Spy Catalog* (Intelligence Incorporated, 2228 S. El Camino Real, San Mateo, CA 94403; ISBN 1-880231-10-7) for literally dozens of names, addresses, and phone numbers of data information providers, along with an evaluation of their services. You don't need to patronize these services in order to steal ideas from them.

Basically none of these providers specializes in politicians, so after a little self-education and set-up, you may be in a position to start your own business in political investigations. Bill yourself as a 21st Century Sherlock Holmes. (*Somebody* has to stop the nefarious influence of DigiCrime, Inc., found at <<http://www.digicrime.com/>>.)

Oh. About those foreign bank accounts. Well, I'll leave that to your imagination. But a little birdie told me if you call a military base computer, find an out-dial number, call another military base, and so on, going through a *minimum* of three military bases, any trace back will stop at the third military base.

Whatever you do, don't do anything illegal.

Ω

Monitoring Russian Communications

by Tom Roach

<troach@netcom.com>

A fascinating facet but not widely publicized portion of the SWL hobby is the monitoring of Russian radioteletype (RTTY) and continuous wave (CW) i.e. Morse code, transmissions. Why the Russians? Regrettably, because they are about the only ones left who send any amount of meaningful unencrypted traffic on HF. With the terrible financial status that governs most of Russian commerce, the financial resources to update this antiquated system are not yet in place. Still, as Janis Joplin said "Get it while you can!". Many fascinating insights can be gained from pursuing this relatively seldom pursued hobby of monitoring HF radioteletype signals. In the future you once again may gain an insight into the Soviet Space program by monitoring the messages sent to their space program's Space Event Support Ships (SESS). Since the end of the cold war the Russians have been forced to mothball this incredible fleet of collection

vessels. Perhaps when things stabilize these interesting ships and their fascinating communications will be heard once again by fascinated hobbyists.

Today's hobbyist will have to be satisfied with Russian commerce. This isn't all that grim. You might come across the cargo manifest of a Russian freighter. This may be the first indication to the general public if the Russian bear turns sinister, as they may change from carrying fish meal to weapons. You certainly will be able to find out more about the Russian fishing industry than you ever cared to know! But learning how to analyze these messages is great training in case things live up. There is always the adventure of at sea medical emergencies. Here are an example of that and other "typical" Russian messages you might encounter:

RTMS MALAYA ZEMLYA NVR/MRKH 111 94 20/7 0000=

Translation: Message is addressed to a Russian vessel named the Malaya Peninsula home ported in Novorossisk. The message is time stamped 20 July at midnight.

2 ADRESA [Two addresses]

NOVOROSSIYSK VODZDRAV GBZDRAV USOVSKOMU EZDRAV
RAMZANOVU= [Novorossiysk,
Usovskiy, Ramzanov]

[From ship to two "zdrav"s. A "zdrav" is a medical treatment point, probably similar to a naval hospital in this case.]

PRODOLZHENIE NASHEY 135/07 [Continuation of our [message] 135/07]

2/ GARIFULIN EDUARD {LAST NAME DELETED FOR PRIVACY} 1945
G ELEKTRIK OBRATILSYA 070791 G ZHALOBY NA SLABOST'
GOLOVNUYU BOL' VYSOKUYU TEMPERATURU 39.7 T4K ZEV
41STYY V LEGKIKH ZHESTKOE DYKHANIE KHRIPOV NET
PERKUTORNO LEGO4NYY ZVUKH GOLOSOVOE DROZHZHAN IE
USILENNO T4K POLU4IL OKSATSILIN 1.0 =50SLOV= 2 RAZA SUTKI
V/M GENTOMITSIN 0.08 2 RAZA SUTKI V/M RASTVOR ANAL'GINA
50 PROTSENTNYY 2.0 V/5. 048 0926SHENII TEMPERATURY DO 39
GRADUSOV POLIVITAMINY T4K 120791 G GOSPITALIZIROVAN
GOSPITAL' PORTA MONTE VIDEO DIAGNOZOM
PRAVOSTORONNAYA PNEVMONIYA RENTGENOLOGI4ESKI
DIAGNOZ PODTVERZHDEN

Translation:

MONITORING AND ANALYZING SOVIET DATA

First you must locate a Russian signal to monitor. I live on the West coast of the United States so I find it particularly easy to monitor transmissions from Vladivostok and Petropavlovsk. Both of these Russian cities are renowned military and civilian maritime hotbeds. Another Russian city close to Vladivostok which also generates maritime traffic of interest is Nakhodka. It is very helpful to have some good reference material. Based on the logs I have seen from listeners in the mid West and East coast of the United States, Russian signals are even easier to find. A good place to look for frequencies bands to monitor is the CFL or Confidential Frequency List. If you are on the Internet, send me an email message and I will tell you how to join a shortwave group which specializes in monitoring these sort and similar transmissions [troach@netcom.com]. The following are some bands where you are likely to encounter Russian radioteletype activity. 6300.5 to 6311.5 kHz 6314.5 to 6501.0 kHz 8396.5 to 8437.0 kHz 12560.0 to 12656.5 kHz 16785 to 16903.0 kHz If you live on the West coast of the United States things are not as active as they are on the East coast. If you live in Europe, well I don't think you will have ANY trouble finding signals to work on. For my location (San Jose, CA) I currently [December 1995] find the 8 and 12 Mhz segments the best during early to mid-evening. Following the instructions which came with your decoder, set your decoder for 170 Hz, 50 baud signals. Tune in 500 Hz increments between the signal RF limits listed above. I have discovered four other frequencies. Typical Russian radioteletype traffic can be heard from Soviet station UKA in Vladivostok. It often consists of the Soviet equivalent of MARSGRAMS. That is to say relatively brief messages from the families and loved ones of Russian men and women working at sea, often on a huge fishing vessel. If you know just a few words of Russian you can tell these messages from the rest. As I noted in my comments on Soviet CW, look for the Russian word TSELEUM. With the knowledge of just a few such words you can usually get the drift of most messages. The PK-232, and probably other RTTY or CW decoders feature a mode which outputs text in what is known as "transliterated Cyrillic" or "code 3". This means you get Russian words that read most like English. For example code 2 "Wladiwostok" is the more familiar "Vladivostok" in code 3. If you are used to manually copying Soviet CW, then you have been using "code 2". Another type of message which abounds is official messages that list the types and amounts of cargo. One I message I saw kept using the word TONNE preceded by some numbers and followed by TRESKA. A Russian dictionary reveals their cargo as cod fish. Another category of message that you may see are the KRIPTOGRAMMA series of messages. These are encrypted messages of a secret or private nature. Here is an example of such a transmission of a KRIPTOGRAMMA message:

UPTZH UPTZH DE UKA K

receiver be "stable" and selective. The stability is required because if your receiver drifts in frequency, then the signal you send to the decoder device will eventually be unusable. The Soviets seem to use stable transmitters so any drift you deal with is likely to be due to your receiver. The selectivity requirement is to keep other nearby signals from interfering with you. If you have an HF-1000 you can set the bandwidth to 225 Hz otherwise for most receivers I find the "narrow" 500 Hz bandwidth filter works nicely with "standard" 170 Hz frequency shift signals. For ARQ/SI TOR A signals the bandwidth should be at least 325 Hz. Actually a good decoder like the M-7000 seems to tolerate interference from "nearby" signals quite well. In reality you will seldom find two signals which interfere with each other because they are close to the same frequency. They are usually either the same frequency [no filter will help that!] or on an adjacent channel and thus separated enough in frequency so the pose little threat of interfering with the chosen signal. For RTTY your receiver should ideally be tunable in frequency increments of 10 Hz or better. It also would be nice if the receiver was actually tuned to exactly the frequency it indicates. An error as small as 40 Hz, whether from drift, mistuning, or poor receiver tuning calibration can result in a garbled signal. Receivers of adequate technical means to monitor radioteletype include (but are not limited to) the Kenwood R-5000, JRC NRD-525/535D series, Watkins-Johnson HF-1000, and the ICOM R-71A. Top notch receivers [new] will cost somewhere between \$800 to \$4000. You should a reasonably good antenna and a relatively noise (RFT) free location. By reasonably good, a "longwire" at least 25 feet, or more, in length is desirable. The next component in the system is the RTTY decoder. I suggest you discuss this purchase with the technical staff of any of the major SWL retail stores [EEB, Gilfer, Universal Radio, Grove are popular in the United States, and Lowe in Great Britain]. If you live in the United States, look for their ads in magazines such as Monitoring Times or Popular Communications.

I like to be able to store intercepted radioteletype data in a computer file for subsequent analysis, not just read it off a monitor or print it out. There are PC compatible decoder cards but my personal favorite decoder box remains the Universal M-7000. If you do buy an M-7000, be SURE that the RS-232 is correctly wired. It does NOT use the standard "straight through" connections. Make sure your dealer understands and can supply or tell you how to rewire the RS-232 plug. The Russians still use one of the least complex RTTY transmission schemes to transmit the majority of their radioteletype messages. [Note: This is still true although they are using ARQ/SITOR A as well]. Most of the signals you will want to copy use a 50 baud speed with a 170 Hz, frequency shift to transmit data. I often pick up Soviet ships in the ARQ or SITORA mode as well. For the optimal subsequent analysis of your data you are best served if you have a microcomputer.

7/7/91, Electrician Eduard XXXX ([born] 1945) complained of weakness, head pain, a high temperature of 39.7 [C]. His mouth was clean, in his lungs breathing was tough, no wheezing, [?] pulmonary sound, vocal trembling increased. He received Oxatcil in 1.0 =50 words= 2 times a day V/M Gentamycin [?] 0.08 2 times a day w/m a 50% [analgesic?] solution. [Lowered? -looks garbled] his temperature to 39 degrees [with?] poly-vitamins. 7/12/91 Hospitalized in the Montevideo port hospital with a diagnosis of right-side pneumonia. An x-ray diagnosis corroborated.

FMED FEDOROV= [FMED (probably an abbreviation of an administrative title like fleet medical officer)] Fedorov 136/07 KMD PUKHAL'SKIY [countersigned by the vessel's master named Pukhal'skiy] NNNN [NNNN is used to indicate the end of a message]

+++++

BATM 6124 LNG/MRKH 4 102 2/7 0600=

2 ADRESA=

LENINGRAD RYBRADIO PRPG SAMTSOVU KOPIYA PRFL
KOVALENKO=

DOKOVANIE BATM 6124 BYLO OPREDELENO ADMINISTRATSIY
ABSA 290791 TCHK ODNAKO NA SUDNE POSTAVLENNOM DOK DO
6124 OBNARUZHENY RAZRYVY OBSHIVKI PODVODNOR CHASTI
KORPUSA ZPT SVYAZI ETIM POSTANOVKA 6124 DOK BUDET
PROIZVEDENA TOL'KO POSLE 150891 TCHK NAMI NA PRAVLENO
PIS'MO ADMINISTRA TSII ABSA PREDUPREZHDENIEM O TOM CHTO
POTERI PRIBYLI ZA PROSTOY SUDNA 100891 BUDUT OTNESENY ZA
SCHET ABSA TCHK SUDNO PO VSEM CHASTYAM ZA
ISKLYUCHENIEM PODVODNOY CHASTI BUDET PRED'YAVLENO
REGINTRU SSSR 150891 TCHK PROSHU VAS HEGO RAZRESHENIYA
NA ZADERZHKU VYLETA NA RODINU DO OKONCHANIYA
PRED'YAVLENIYA REGISTRU PODVODNOY CHASTI INZHENERA
REGISTRA OMILAEVA V V I MONTAZHNIKA KOZLOVA V V=

37/08 KM CHUMAK

Translation:

Docking of BATM 6124 was set for 7/29/91 by the administration of ABSA. However, tears were discovered in the plating of the underwater part of the on the supply ship. In connection with this, docking will be carried out only after

8/15/91. We were sent a letter from the ABSA administration warning about losses. The ships will be [?] on 8/10/91 owing to ABSA. All parts of the ship, with the exception of the underwater part, will be shown to the USSR Register on 8/15/91. We ask your permission to delay flying to the Motherland until the conclusion of showing the underwater part to the register. Register Engineer V.V. Omilayev and Fitter V.V. Kozlov.

RTMKS-0901 TLN/MRKH 12 24 2/8 0500=
TALLINN NARVA MANTE 2 KV 20 FEDOROVY=
LYUBIMAYA POZVONYU 4 AVGUSTA 07 40 UTRA VYLETAYU
MOSKVY 15 AVGUSTA 16 05 REYS
2117 TSELUYU=SLAVA

Translation:

Tallinn, Narva. Mante 2, Apt. 20. [to Ms.] Federova

Beloved, I will call you Aug. 4 at 7:40 in the morning. I'll be flying into Moscow Aug. 15 at 16:05, Flight 2117. Love, Slava.

As you can see you can never be sure of what you will come across. The following is based on my personal exposure to this facet of the SWL world. I have tried to provide the names of vendors for specialized books or equipment as necessary. My opinions on equipment are just that. Given the constraints of cost and interest level, whatever works for you is best. I only hope that you will share the fruits of your experience with others, on Compuserve or the Internet. Please read the following in the spirit it is given; a desire to share what knowledge I have picked up since concentrating on this part of the SWL hobby.

Soviet CW

In theory this will be the least expensive of two paths of the hobby since the receiver requirements are less critical, and therefore less costly. To really keep expenses low you need only to be able to copy Morse code. Technology opens the door for those with the budget who can not copy Morse code. Even if you can copy Morse, you better be able to copy at least 20 WPM and that is at the slow end of the spectrum for most Soviet CW transmissions. Also the Soviets use special Morse characters for some characters peculiar to the Cyrillic alphabet. When you are ripping along at 20 WPM a "new" or unfamiliar character can throw you for a loop. For example "di di dah dah" is the Morse symbol for the Russian "YA". Not especially difficult but it will take you a

while to add new characters to those you already know and still copy at 20 WPM. A complete table of Morse code characters for Russian, Japanese, Arabic and other languages can be found on page 19-3 of the 1988 [or later] ARRL Handbook (approximately \$20). This book, and I presume the more recent editions, also has a lot of other useful technical information and should be in every serious SWL's library.

As already noted, the receiver requirements for CW are less stringent than for RTTY. Among relatively low cost alternatives, I find the Sony ICF-2010, an already excellent ISWBC receiver, generally adequate for CW. I recently made a side by side comparison of my NRD-525 and the Sony. I connected them both to the same 100 foot longwire and tuned to a weak CW signal. Using this highly "scientific" comparison <grin> I found that the weak signal was completely audible on both receivers. In a crowded environment the Sony's lower quality "narrow" filter will not perform in the same league as a NRD-525 equipped with a 500 Hz filter. [I have since moved up to a Watkins-Johnson HF-1000 receiver with a CW bandwidth as narrow as 56 Hz is now possible!]. When I first tried to compare the NRD-525 with the Sony on the same signal (see comments on "COL" in Havana, Cuba which is discussed later), I wrote the Sony off as a total loss. I couldn't hear the signal at all on the Sony while it was loud and clear on the NRD. Then it dawned on me. I tuned the Sony 800 Hz BELOW the actual RF (in this case the NRD was on 15024 kHz and the Sony was retuned to 15023.2 kHz) and my initial disgust turned to satisfaction. So if you are using a Sony ICF-2010 or a receiver which works in a similar manner, don't forget to SUBTRACT the 800 Hz when tuning for CW signals based on "exact" frequencies listed by the Confidential Frequency List (CFL) {also to be discussed further below} or similar publications. For those that have the money you might think you could purchase an M6000 or M7000 and read the CW on a VDT or computer monitor. My attempts at doing this indicate that the signal better be near perfect quality if you expect good results. The best automatic CW demodulator is a poor second to a practiced human working a "typical" CW signal. Assuming you are able to copy Soviet CW, what can you expect to find in this traffic? Soviet CW often sends messages that appear identical to those you will see if you are able to copy Soviet radioteletype. The Soviets also use CW to transmit weather warnings and naval area closures. I recall one message notifying of a closure in the East China Sea. I used the Compuserve "GO NEWSGRID" feature using the keyword MILITARY. A recovered news story revealed the Chinese were holding a simulated nuclear attack war game in this area. From personal experience I can recommend Ferrell's Confidential Frequency List (9th edition) [CFL] as a source of exact frequencies to tune to for either CW or RTTY. In many cases the CFL will tell you the exact UTC time at which Naval weather or Naval warnings will be broadcast. To successfully monitor radioteletype signals you will need a good short wave receiver, a radioteletype "decoder" device, and a computer or video monitor. First, the receiver. The requirement for radioteletype is that your