

THE LISTENING POST is the newsletter of the **Bay Area Scanner Enthusiasts (B.A.S.E.) Club**, 105 Serra Way #363 Milpitas, CA 95035. The newsletter size varies from issue to issue, depending on member contributions. You and your inputs are the key to our success in having a rewarding scanner club newsletter. The newsletter contains a wide variety of material pertaining to the radio monitoring hobby. If this newsletter brings some information to you that will assist you in your hobby, then our aim has been reached. IBM PC/clone compatible 3.5 or 5.25 inch disk media inputs using the ASCII or WordPerfect 6.0® format are welcome. Articles may also be submitted by members utilizing the BASE Club BBS. Subscription rate is \$25.00 for six issues. Sample back issue: \$2.00; membership information for a business size Self Addressed Stamped Envelope (SASE). Permission is hereby automatically granted to reprint from this newsletter, provided due credit is rendered the original contributor and the Listening Post. If there is something useful, we wish to share it. Advertising rates: Business Cards: one (1) issue, \$5.00, Copy Ready One-Half Page: one (1) issue, \$10.00; Copy Ready Full Page: one (1) issue, \$20.00. **SETTING THE RECORD STRAIGHT:** The Listing Post corrects all significant errors that are brought to the Editor's attention. If you believe an error has been made, please address all correspondence to the Editor. **DISCLAIMER:** Opinions expressed in *The Listening Post* are solely those of the person to who attributed. Advertising in *The Listening Post* does not constitute endorsement of the products therein. The B.A.S.E. Club/San Jose is not affiliated with the Base Station/Concord, it's owners or employees. **TO CONTACT MEMBERS:** If you need to contact a member whose address you do not know, you can have the BASE Club forward it for you. Put your message to that member in a stamped envelope with your return address and mail to the BASE Club Address.

**THE SPIRIT OF THE BASE CLUB: IT IS REALLY MORE THAN
RADIOS-IT'S PEOPLE SHARING SOMETHING THEY ENJOY
DOING AND BECOME THE BEST OF FRIENDS.**

A SCANNER HOBBYIST DOES IT WITH FREQUENCY



THE LISTENING POST

B.A.S.E. CLUB NEWSLETTER

IN GOD WE TRUST - ALL OTHERS WE MONITOR



JULY - AUGUST 1994

BASE CLUB Inc. MANAGING DIRECTORS

Sam Dunham	President	BASE 41
Bruce Ames	Vice President	BASE 108
Manuel Castrillo	Secretary	BASE 111
John Crane	Treasurer	BASE 426

NEWMAGAZINE EDITORS

Editor-in-Chief	OPEN	
President's Column	Sam Dunham	BASE 41
Secretary's Column	Manuel Castrillo	BASE 111
Database Manager	Doug Werner	BASE 522
Amateur Column	John Crane	BASE 426
Disaster Preparedness	Bob Gillmore	BASE 582
Military Editor	Mike Heightchew	BASE 144
Public Safety Editor	Rod Smith	BASE 12
Travel Editor	Bruce Ames	BASE 108
Aviation Editor	Marilyn Mayer	BASE 327
Federal Editor	OPEN	
Railroad	Matt Willett	BASE 521
Shortwave Editor	Richard Tidd	BASE 446

BASE CLUB MEETING SCHEDULE

July 11, 1994 (Monday) James Person, AT&T Utility Station KMI
 August 8, 1994 (Monday)
 Sept. 12, 1994 (Monday) Dan Werthimer, UC Berkeley, Project Serendip
 October 10, 1994 (Monday) Rod Deakin, Utility Station KFS

Doors open at 1900. Meeting is from 1930 - 2200 in the Community Room at the Milpitas Police Administration Building, 1275 North Milpitas Blvd., Milpitas. The Police Administration Building is

located 1.5 miles north of Calaveras Blvd. (Hwy 237). Hwy 237 links 680 and 880. Bring your new or used equipment to demo, talk about, sell or trade. Bring those handouts to share. These meetings are for members and invited guests only. If you would like to donate bake goods or 'something' for a door, raffle or 'white elephant' prizes, bring them to the meeting. Hope to see as many of you as possibly that can make it. Hams are suggested to use 147.855 (-) (no PL) for talk-in and that GMRsers can talk-in on 462.575 for directions and information if late, lost etc.



IT'S OFFICIAL!

We are now known as the **BASE Club Incorporated**. Per our articles of incorporation on file with the State of California:

A. "This corporation is a nonprofit mutual benefit corporation organized under the Nonprofit Mutual Benefit Corporation Law. The purpose of this corporation is to engage in any lawful act or activity for which a corporation may be organized under such law. This corporation is not organized for the private gain of any person."

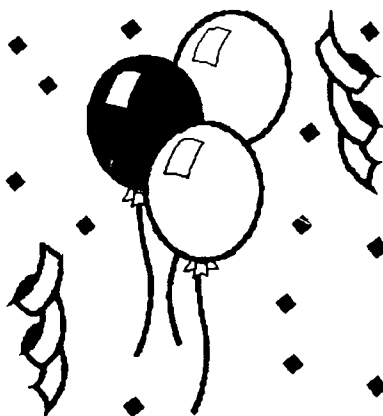
B "The specific purpose of this corporation shall be to promote fraternalism and information exchange among members, to conduct activities which advance the general interest and welfare of radio communications in the community, and to promote cooperation between government, industry and private users of the radio spectrum."

It is with deep regret that I announce my resignation as Chief Editor and Publisher of the BASE Club's newsmagazine *The Listening Post*. I am tendering my resignation based on four factors: 1) I have no time to myself with my work and travel schedule and in editing/writing/publishing the newsmagazine. 2) I too want to have fun playing radio. I cannot do that with my current level of work and newsletter activity. 3) My level of frustration has finally been reached with the lack of participation and inputs for the newsmagazine from the Club membership in general. 4) *The Listening Post* has become the BASE 108 newsletter. That is not fair to you nor fair to me. We (the BASE Club Inc.) cannot continue to put out a quality forty-plus page newsmagazine with article and column inputs from the same five or six people.

I will, however, continue to remain as Vice President and active Board member of the BASE Club Inc. and I will continue to submit a travel column each issue for the newsletter.

If you are interested in applying for the position of Chief Newsletter Editor and Publisher, please send your request to Sam Dunham BASE 41 President. The Club needs an Editor/Leader to take over the September/October issue. *Bruce A. Ames* BASE 108 - Vice President

Doug Runyon writes ".... unfortunately I have accepted a new job back in the Midwest. I will be moving on or about August 7th. Though I have enjoyed being the Federal Forum Editor for the past few months, I think it would be extremely difficult for me to still write about Bay Area Federal comms from 3,000 miles away. I do thank you for the opportunity and I hope I have fulfilled your expectations. I'll be in Atlanta in October and will stop by and say HI. Thanks again and take care. DOUG Base 616." *OK folks, who would like to sign on as Federal Monitor Editor?*



**1ST ANNUAL BASE CLUB INC. PICNIC
& BBQ SUNDAY, AUGUST 14, 1994 AT
ED R. LEVIN COUNT PARK by Richard
Tidd (BASE 446)**

Sunday August 14, 1994 is the date set for our first annual club picnic and BBQ. It will be at Spring Valley Pond Group area in Ed R. Levin County Park on Calaveras Rd. Santa Clara County.

Take Hwy. 237 east from 101 or Calaveras Rd. east from Hwy. 680. Hwy. 237 turns into Calaveras Rd. just east of Hwy. 680. Calaveras Rd. will take you right into the park. Continue to second picnic entrance on the right. Turn right into the second entrance and turn left at the kiosk.

You may have to pay \$3 to enter. Continue to the next parking area and you are there. We will have a large fairly well covered group area with a large group BBQ, plenty of tables, horseshoe ring, volleyball court, pond, hang-gliding viewing, hiking/equestrian trails, golf, and lots of open space.

In case you are remembering the picnic the Club had a couple years ago, you might say that picnic was the first. Well, you would be correct. That picnic was the first, but this picnic will be the first annual. The other picnic was not coordinated as this one will be and we plan on one each year, possibly in different locations.

At press time, the club will provide the main food such as hamburgers, hot dogs etc. Please bring all the other food and drink items for your family and friends. You may bring your radios but there is no AC power. For those on the GMRS repeater, we will have a talk in. For those who can only monitor, program your radio for 462.575. We will use simplex in the park. We also plan on having a raffle for those semi-valuable prizes. We may even have a surprise for you, but I won't tell you yet. We may even play "pin the rubber duckie on the scanner" (or BASE 144, what ever the vote is).

Come one, come all, but just come. Bring the spouse, significant other, kids, the BBQ that has been collecting dust, your friendly smile, a radio if you want, and any prospective new members. This picnic is for club members, their family and invited guests.

PRESIDENT'S CORNER by Sam Dunham Base 41 President

I'm pleased to report that we are now the Bay Area Scanner Enthusiasts Incorporated, a California Mutual Benefit Corporation! A long time coming; this is a major step forward for the B.A.S.E. Club. Incorporation has already started opening doors for us. John Crane, Treasurer, has established savings and checking accounts for the Club at Wells Fargo Bank.

With the ability to own property and enter into agreements, we can now move forward with the BBS expansion plans, tours and the annual picnic. It's nice to start off healthy - we have over \$2500 in the treasury. This will go a long way towards getting a few BBS nodes up around the Bay Area.

One issue continues to bother me, though. There are almost 400 members in the B.A.S.E. club, yet only a small group of individuals regularly contribute to the newsletter. The quality of the articles continues to be high, but we need more contributors. There's a lot happening in our area - let's talk about it!

We will be having Club recruiting tables at the Foothill and Livermore flea markets. We need to have volunteers for these outings, so please drop us a line at the Club P.O. box or the next meeting. This is a good chance to earn MRE's and to check out the very latest on the used radio, computer and

electronics scenes. MRE - what's that? Many of you already take advantage of this program, but if you think an MRE is something you're not ready to eat, let me set the record straight. The MRE program (Membership Renewal Extension) is one where you get an extra two months of club membership for each new member you recruit. Just make sure the sign up form has "referred by BASEXXX" on it so you get credit.

One question I've been asked a few times lately is what happened to the old Club phone number? Well, the Club never really had a telephone. Herman Frisch was nice enough to let us use his while he was president. But now, there isn't anyone available to answer a phone if we had one.

Some of you probably noticed that we've had a few glitches and delays in getting the last two newsletters into circulation. The problems we've had aren't major - just a transition. Since the new Club board took over in February, a whole new group of volunteers have been printing, stamping, pasting and addressing. In the past one or two people were doing all the work, and now it's being done by a larger and different group.

Till next issue - Sam Dunham - BASE 41

NEW CLUB PROGRAM DIRECTOR by Richard Tidd (BASE 446)

The BASE Club' Board of Directors have made some job changes among the BOARD members. The changes are to better align BOARD member talents to the correct job. With that in mind, I suggested a job swap between Doug (BASE 522) and I. I was working on improving the Club data base, but Doug has better skills in that area. I had coordinated one speaker already and was working on others so the rest of the BOARD agreed with my suggestion.

Program Director is a term I coined to describe the person who is responsible in scheduling guest speakers or other items for the Club meetings. To that end I list the planned guest speakers known as of press time:

PLANNED CLUB GUEST SPEAKERS for 1994 AS OF PRESS TIME

- | | |
|-----------|--|
| July 11 | James Person from KMI Radio. KMI is an HF AT&T station providing HF radio communications to the ships at sea. Their office and transmitter are located at Inverness in Point Reyes National Seashore. |
| August 8 | Possible speaker from ARINC. ARINC is the company that provides HF long distance radio communication to aircraft. They provide typical aircraft type communications as well as company communication and phone patches to and from aircraft. |
| Sept 12 | Dan Werthimer of Project SERENDIP from UC Berkeley. Don uses a 1000 ft. radio dish to listen for signals from space that might reveal intelligent life in the Galaxy. He will discuss the radio equipment he uses. You will be surprised as to what frequencies he is currently listening to and the similarities in equipment to what we use. |
| October ? | Rod Decker from KFS Radio. KFS radio station is an HF utility station. They provide CW and AMTOR format communications to company ships at sea. Their office is located in Half Moon Bay and the transmitter is in Palo Alto. |

If you have any suggestion for guest speakers, please let me know. If you would like to coordinate a speaker, please do so, just coordinate the date and idea with me.

We are planning on a great weekend of radio fun on October 21-23 at the annual Monitoring Times Convention. Like last year, the Convention will be held at the Atlanta Airport Hilton. This Hilton offers it all for you, gorgeous rooms, large spacious meeting and exhibit rooms; great restaurants, sports bar and much more. Come join us and see just how much radio fun you can cram in, in one weekend. Currently, we are planning on five members from the Bay Area to be there as well as members from Chino Hills (LA), Santa Barbara, Indianapolis, Hartford, and Maryland areas. If you're a HAM, there will be an Amateur repeater at the Convention sponsored by the Bearcat Radio Club. If you are a GMRS licensee, bring your HT, we'll operate on one of the low power splinter freqs. If you are interested in attending, see Sam (BASE 41), Bruce (BASE 108), John (BASE 446) or Ed (BASE 18) at one of the BASE Club meetings for more information. ICOM is planning on giving away \$8000

in prizes.

David Palmer (BASE 608) sent in a freq list of **Walt Disney World frequencies** that he intercepted off InterNet. "OK, for all of you guys that can't put your radio down when you go on vacation - The (un)official list of Walt Disney World Frequencies. (I'll give you a hint... I work at the Magic Kingdom, so this is about as official as it gets.) All of these frequencies are confirmed; They were obtained from WDW Radio/ Audio Central and traffic has been heard on each frequency. Anything with a * indicates simplex and probably very low power. (The radios we use at 20,000 leagues are only 1 watt for operators and 4 watts for leads) *If you don't hear anything, don't yell at me about it, you just aren't patient enough*!"

151.895	20,000 Leagues Under the Sea *	452.650	Cash Control (Wells Fargo Trucks)
463.975	Custodial Base (EC and MK)	469.3375	E - Stops (Attractions) *
148.100	E-Stop Great Movie Ride *	462.550	Entertainment 1 (Characters)
461.300	Entertainment 2 (Parade Dispatch/Traffic)		
464.9375	Entertainment 3 *	464.500	Entertainment 4 (Special)
453.825	Fire Channel 1 (Reedy Creek Fire Rescue)		
463.750	Hailing (Disney - MGM Studios)	464.125	Hailing (EPCOT Center)
464.400	Hailing (Magic Kingdom)	154.4775	Light Barges (Electrical Water Pageant) *
			Maintenance 2 (Magic Kingdom)
462.675	Maintenance 1 (EPCOT Center)	464.625	
464.800	Maintenance 3 (Disney - MGM Studios)		
462.650	Operations 1 (EPCOT Center)	462.575	Operations 2 (Monorails)
462.625	Operations 3 (Magic Kingdom)	461.600	Operations 5 (Disney - MGM Studios)
464.600	Operations Simplex *	157.740	Pagers (no input)
462.775	Pagers (no input)	462.850	Pagers (no input)
464.0625	People Finder *	468.8125	Point of Sale Systems *
462.475	Reedy Creek Energy Services	464.200	Resorts 1
461.700	S.T.E.P. (Fireworks)	151.655	Space Mountain/Riverboats/Studio Trams *
			Warehouses 1 *
451.500	VUT	461.3375	
461.9125	Warehouses 2 *		

Also, Disney is steadily moving a lot of stuff to a 12 channel trunked system in the 800's. Currently, Security, Resorts, and Watercraft (plus some V.I.P's) use the system. I've seen the charts, and most of the traffic will move there within the next few years. Disney should be setting up a 900's trunked system also. So, many of the non-theme park frequencies may be moving there.

South Bay Towing is on 463.550.

RAILROAD SLANG by Matt Willett BASE 521 RR Editor

Every industry tends to create its own language using terms that only it's people understand. As time goes on, new expressions are created, others become obsolete, and still others evolve from an old definition to a new one. After time, the history of some terms becomes so eroded that it is unclear how something got its name. This glossary is intended to give the occasional readers of this column an explanation to many of the terms that may be used here and elsewhere. Part 1 & 2

ABS	Short for 'Automatic Block System' or 'Automatic Block Signal'. A system of signaling lights placed along the side of the tracks to keep trains from crashing to each other.
ALCO	Short for 'American Locomotive Company'. A builder of locomotives.
BAD ORDER	A defective freight car or locomotive. (Also slang for bowel movement, as in to 'set out a bad order'.)

BEANERY	A cafe for railroaders.
BIG HOLE	To put out a train into an emergency braking condition.
BIG HOOK	A crane used to put derailed cars and locomotives back onto the track.
BINDERS	The brakes of a freight car.
BOOMER	A railroad worker who travels around the railroad system (usually for lack of seniority) to where the work is.
BOWL	The classification tracks at the bottom of a hump.
BOXCAR	The standard freight car.
BRAKEMAN	The grunt of the train crew. His job is to line switches, flag crossings, make or break joints, and tie down spotted freight cars. Before the use of Air Brakes, rode on top of the train and manually applied the freight car brakes.
BRANCH LINE	A railroad track built to less than mainline standards that serves the industries along the way.
BUMPING POST	Any device used to keep a freight car from traveling further down the track. Often placed at the end of a track.
CABOOSE	Also known as: BRAIN BOX, CABIN, CRUMMY, HACK, MONKEY CAGE, SQUIRREL CAGE. A special car (now obsolete, thanks to FRED) for carrying trainmen. Usually the last car on a train.
COFC	Short for 'Container On Flat Car'.
CONDUCTOR	The leader of the train crew. His job is to lead the rest of the crew, handle the paperwork, and catch hell if anything goes wrong.
CONSIST	The Manifest of what a train is carrying.
COUPLERS	Devices that hold one car to the next.
COVERED HOPPER	A freight car which has a bottom shaped like a funnel for easy unloading and is fully enclosed to keep its contents out of the weather.
CTC	Short for 'Centralized Traffic Control'. A system for controlling the movement of trains usually found on the most heavily traveled main lines. Signals and switches are controlled remotely by a dispatcher.
CUPOLA	The portion of a caboose which is above the main roof line.
CUT	1. Verb. To intentionally split a train in two. 2. Noun. A specific group of freight cars.
CUT LEVER	A lever that when raised, allows two cars to disconnect from each other.
CWR	Short for Continuous Welded Rail. Standard 39 foot lengths of rail which have been welded together into a single rail up to 1/4 mile long. CWR eliminates the much of the need for Rail Joint Bars (maintenance intensive little buggers that are the cause of many derailments).
DARK	Sometimes 'In the Dark'. A line of track without the benefit of a signal system.
DEADHEAD	1. A crewman traveling on a train while off duty. 2. A passenger who travels by train without paying a fare. 3. A passenger train traveling without passengers.
DEAD ON THE LAW	A crewman who has not had eight hours of rest since his last shift. A crewman may work a maximum of twelve hours then must take eight hours off.
DERAIL	A device placed on the top of the rail which causes a runaway car to jump off of the track, rather than foul the main track.
DERAILMENT	Any time a car or locomotive leaves the track and lands on the ground.
DETECTOR	An automated train checker. Detectors may check for any or all of the following conditions; hotbox, dragging equipment, excess height or width. If a defect is found, older detectors will flash lights on top of the detector, newer detectors will transmit a voice message on the main line frequency telling the train crew to stop and check their train.
DISPATCHER	The person who coordinates train movements, getting trains to their destination without crashing into each other.

DOG CATCHER	Any one who relieves a crew member that has 'died on the law'.
DOUBLE	A technique where a train is split and later rejoined while enroute to their destination. Usually done when a train does not have enough horsepower to get the entire train up a steep hill.
DOUBLESTACK	A specialized freight car built specifically for containerized freight where one container sits on top of another. Sometimes known as 'Well Cars'. Doublestack cars are often, but not always, permanently linked in groups of three or five. When permanently linked in this manor, a single 'Car' is comprised of many 'Wells'.
DRAG	A slow moving freight train.
DTC	Short for 'Direct Track Control' or 'Direct Train Control'. A system for controlling the movement of trains usually found on lightly used track.
DUTCH DROP	Also known as a DROP or KICK. A technique used to speed up switching chores in which a car is released while the train is moving. The momentum carries the car through a switch where it rolls to a stop either by friction or by lightly crashing into another car. A SWIFT KICK can cause damage to the freight, the car, and the conductors ear.
DWARF	A Signal Light placed on a short mast or at ground level.
DYNAMICS	Also known as DYNAMIC BRAKES. The electric traction motors of a diesel locomotive can be turned into electric generators which causes the train to slow without the use of the air brakes.
EMD	Short for 'ElectroMotive Division'. A locomotive building company owned by General Motors.
ENGINEER	The Crewman responsible for the operation of the locomotive.
EOT	Short for 'End of Track'.
ESPEE	Phonetic spelling of S.P. Short for Southern Pacific Transportation Company.
EXTRA BOARD	A listing of crew members without regular jobs. Crew members on this list are assigned non-standard jobs on a rotating basis.
FERROEQUINOLOGIST	A student of the Iron Horse. A Railfan with an attitude.
FIREMAN	The crew member who, in the days of the steam engine, was responsible for fueling the locomotive. Nowadays his job is to fetch the coffee and occupy the seat on the far side of the engine.
FLAG	The act of protecting a train either at a road crossing without automatic crossing gates, or, when a train is stopped, to warn a following train.
FLAT	Also known as FLATCAR. A freight car without sides or a roof.
FLIMSY	The nickname for a written train order.
FOAMER	A derogatory term for Railfan.
FRED	Short for 'Flashing Rear End Device'. An electronic box attached to the last car of the train. A FRED monitors the air pressure in the brake line and transmits a coded signal to a monitor in the locomotive, and, flashes a red light toward the following train. All FREDS transmit on 457.9375.
FROG	The section of track at a switch where one rail crosses another.
FUSEE	The railroad term for Highway Flare.
GE	Short for General Electric. A builder of locomotives.
GON	Short for Gondola.
GONDOLA	A freight car with short sides.
GRAB IRON	The handholds on the sides of cars and locomotives that allow a crewman to ride on the train for a short distance.
GREASY SPOON	A derogatory term for Cafe.
GRIEVER	The Union representative who pleads your case when you screw up.
GUN	See Torpedoes.

HELPER	An extra locomotive(s) added to a train to help it up or down a steep hill.
HIGH BALL	A term indicating that the track ahead is clear. A holdover term from a long obsolete type of signal.
HIGH IRON	The Main Line of track. The main line is usually higher than a passing siding.
HOBO	Also called BO, BUM, or TRAMP. Any person riding on a train without permission.
HOGHEAD	A derogatory term for Engineer.
HOG LAW	The hours of service law. See DEAD ON THE LAW.
HOLE	A passing track. Where a train waits to be passed by another train.
HOPPER	A freight car with high sides and no roof and where the bottom is funnel shaped to allow quick unloading.
HOSTLER	A Switchman who controls the yard switches.
HOT BOX	A term for an overheated wheel bearing.
HUMP	1. The act of releasing a car from a train to let it roll down a small hill. 2. The small hill in a hump yard.
HUMP YARD	A receiving yard for cars that roll off of a small hill.
IRON HORSE	A nickname for a locomotive.

Has anyone been monitoring the phone patch on 451.9625?

The Baldwin 4-6-0 #40 & Alco 2-8-0 #93 of the Nevada Northern RR will be the stars in a RR Spectacular October 1-2 out of East Ely Nevada. They will pull passengers, freight and mixed consists on the Keystone & Hiline routes. Call Railfan Tour Adventures at (916) 836-1748 for more info. Prices start at \$199.00 I show Nevada Northern on 462.125 for Road & 462.150 for Yard. Bruce Ames Editor

FEATURED ARTICLE

COAX AND YOUR RADIO by David Palmer BASE 008

Introduction

While most scanner radios and antennas are rated at 50 ohms, you may still get good results by using common CATV 75 ohm coax for your receiver.

	50 MHz	100 MHz	400 MHz	1000 MHz	db loss per 100 ft:
9913	.9	1.4	2.6	4.5	
RG6	1.2	1.8	5.1	8.3	
RG59	1.8	2.8	7.5	10.0	
RG8	2.2	3.0	6.5	12.0	
RG8m	2.2	3.0	7.5	13.0	
RG58	4.0	5.3	12.0	22.0	

I chose RG6 for my scanner antenna lead in, for the obvious reasons of availability, familiarity, and ease of connector installation.

Availability. Found anywhere, RG6 is widely used in CATV installations, Off Air antennas, studio use, and limited use in amateur radio setups.

My familiarity with the coax comes from 15 years as a CATV installer.

Connector installation requires no soldering, and by using the proper connectors and installation techniques, you get an FCC approved, highly weather resistant connection.

By using CATV 'F' connectors, you can open up a wide variety of equipment available for CATV/Antenna use to your scanner setup. This includes splitters, ground blocks, A/B switches, attenuator pads, and line amplifiers. Adapters are available for changing an F Connector to most anything.

Case in point: My installation consists of a Realistic PRO-2004, a RS Discone (modified with a low-band whip), 120 feet of RG6 dual shield (foil and aluminum braid, not the studio 'Quad Shield'

stuff), one typical ground block, two adapters-one UHF to F and a F to BNC, and an old attenuator switch box that came out of an old piece of test equipment, this gadget has 6 toggle switches on the front, and BNC in-out connections. I can throw the switches and kick in 6 to 80 db worth of attenuation. The reason for the attenuator is so that the Solano County Sheriffs are on the same freq as the Monterey PD, and here in Pacific Grove, I needed some way to lockout the SCSD, without affecting MPD, and this fills the bill. When I'm trying to see what's up in the Bay Area, (100+ miles away) I can easily switch out the pads.

Handling Coax While RG6 is a rugged medium, you should stick to a few basic common sense rules. Pay strict attention to all the warnings that pertain to keeping clear of power lines. Also borrow from the rules in the CATV biz, keep the wire at least 8 feet above any walkway, and don't make any tripping hazards by laying it on the ground or suspending it from chimney to vent to drain pipe or whatever. You certainly don't want to trip while on a roof.

Electrically, it is important not to bend the coax to more than a 4" radius, or crush the coax by using staples, bent nails, cinching down cable ties, or by repeatedly walking on it. CATV signals typically run from 80 to 450 MHz, and may not be affected by such stress, but one kink in the cable may cause a 'suckout' anywhere in the frequency spectrum, causing a loss in signal in probably your favorite band.

Color Matters In outdoor installations, stick with black insulated cable, for the white or beige cables are not U/V proof, they will harden and crack (and corrode) when exposed to sunlight.

Sources for RG6 Coax Use a quality coax, rated 3 to 900+ MHz, with a dual shield of foil and braid. I use aluminum shielded coax, with a copper plated steel center conductor. Common sources include TV/Electronics supply stores, Electricians Supply stores (they can get neat 500 foot "Pay out Pak" boxes of cable)

Connectors The advent of strict FCC rules pertaining to CATV signals causing interference to off-air services has begat an abundance of connector styles. While the best are usually only available to the trade, some consumer level equipment is comparable. The widely used F connector with the 1/2" shoulder is a good choice. This connector requires the use of a Hex Crimper to attach it. A good rule of thumb is to try and pull it off with your bare hands. A well installed connector requires a good tug to remove. Use of a cable prep tool to trim the end is advisable, properly adjusted, it will automatically trim the braid to the proper length, and not score the center conductor.

Tighten the connector finger tight, then about 1/4 to 1/3 more with a wrench. When the main body of the connector (not the threaded part) is snug to the port, you should not be able to wiggle or twist it. Stay away from the two-piece type connectors, as well as the twist-on types.

In outdoor use, to weather-proof the connectors, a simple rubber weather boot (looks like a spark-plug boot), filled with automotive type silicone grease (YES, GREASE) can keep the connection water resistant, while allowing access at a later date without having to peel away layers of tape or RTV from the connection. Tape and RTV eventually allow water ingress, and help keep it in.

Connector Sources Get the right connector for the coax you use, for it is a absolute pain to force a connector on to the wrong coax. If you use RG6, get RG6 connectors. The connectors for quad shield or RG59 are different in size, and while may be forced to fit, will result in a substandard installation. The same sources for the coax apply to the connectors.

Other Items Splitters, Ground Blocks, A/B switches, etc, should all be rated for CATV use, this gets you a higher quality type of equipment, for it must meet the FCC specs for leakage.

Hardware to keep your coax in place is found in the antenna installation section of the TV/Electronics store, when buying attachment hardware, look to see what size cable it is made for. You can get some nice little nylon clips with stucco nails attached to them, but remember to get the ones for the proper size cable, they come for both RG59 and RG6. I don't recommend using a staple gun, you may crush the cable or nick the shield or worse, cause a short with it. Popular nylon 'Cable Ties' or 'Zip Ties' are excellent for using to attach coax to pipes, other wires, or tie-downs made for them. Just don't cinch the tie down too tight, you don't want to crush your coax. For the perfectionist, you can get nylon 'Feedthrus' to dress up any holes you drill in exterior walls, and plastic wallplates

for the inside wall.

Putting it All Together Let's start with the antenna/mast installation completed, you have connected the coax to the antenna, using a weather boot and silicone grease to seal the connection. Put an expansion loop (remember! 4" radius) at on the mast at the antenna end, and run the coax down as in any installation. Now, you have to get to the radio. Your installation may follow any one of these paths: In all cases, make a 'Drip Loop' wherever the coax enters the building. Imagine rain or moisture flowing down the outside of the coax. Where the coax enters the building, go beyond the point of entry, and make a 4" loop in the coax, so that the coax is exiting the wall in a downward position. Water getting in the building on your fault is undesirable.

Attic (Truly Not My Favorite) Put the coax into the attic through a vent under the eaves, or through a 3/8" hole. Once in the attic all that is left is to fish the wire down to desired location. Getting the coax down into a hollow wall is beyond the scope of this file, but I can pass on a tip. If there is a closet or in the same or adjoining room, run the coax down through the ceiling in the closet, and down the corner in the closet, and through the interior wall.

Through Exterior Wall While easy, this may be unsightly. Simply Drill a 3/8" hole in the wall, avoiding (!) any electrical wiring or plumbing that may exist. The best way to do this is to drill from the inside to out. Drill just through the sheetrock or paneling, and STOP. Poke a screwdriver into the hole, and feel around for anything you may damage before proceeding. This also gives you the opportunity to shove aside any insulation in the wall, making feeding the coax through the wall easier.

Put the nylon feedthru on the coax, and poke it in. Feeding the coax from the outside may not be easy. TIP: go inside, and poke a piece of thin, stiff wire to the outside, seeing daylight through the hole helps. Strip 4" or so of insulation from the coax, and tape it to the wire to pull it through. Professional 18" drill bits used in CATV have a tiny hole in the valley of the working end, you leave the drill bit in the hole, then strip off 6" of insulation, leaving 6" of center conductor to put in the drill bit and wrap around it and use it to pull the coax through the wall. Put a wall plate over the coax, install the connector and you're done. TIP 2: Don't drill directly under a window, it will look very ugly on the outside, the window half-framed by black coax. Go directly underneath the left or right side of the window frame. Follow the already existing vertical lines on the exterior of the building, drain pipes, corner siding, or behind shrubbery help hide the coax.

Underneath the House or "got any clothes you don't care for?" Using the same guidelines for exterior wall installation, run the coax from the roof to the basement or crawl space, entering through a vent or hole for the coax. Now it gets difficult, but will allow you to install the coax to a location away from an exterior wall. You drill a hole through the floor, and feed the coax up from the basement or crawl space. TIP 1: Run the coax from the antenna to the crawl space, using a vent or hole nearest to the trapdoor where you access the crawlspace. Then poke the coax into the crawlspace, and cut it there. This will be a splice point, and may be a good location to put in a ground block. Then go inside, drill down into the crawlspace, and feed enough coax you estimate will reach your splice point. TIP 2: Be careful with the drill, along with the Electrical/Plumbing situation above, you may take out several feet of carpet stitches when attempting to drill through the carpet. cut an 'X' in the carpet, put the drill bit through the carpet and drill SLOWLY. Once you have the coax fed, all that's left is to crawl under the house and retrieve it, and bring it to the splice point. Another advantage to this method is that it allows you to keep several feet of coax under the floor, letting you move the scanner around a bit.

Got A Prewired House? Many newer homes are prewired with coax for CATV or antenna use. Intercepting and utilizing the existing coax for your installation can save you a lot of work, and be most pleasing to the eye. If you have a spare prewired TV jack, in your monitoring location (or in an adjoining room, on the same wall...) you may want to use it for your scanner.

Be aware that older homes may be prewired with older RG59 coax, and may not be of use for monitoring 900+ MHz. You need to find where the other end of the coax is, and splice into it. It may be in any location in the building, commonly near the utility entry point, or in the attic.

Boise Inter-Agency Fire Cache	
Tactical F-1	168.050
Tactical F-2	168.200
Tactical F-3	168.600
Command F-1	168.700
Command F-2	168.100
Command F-3	168.075
Air Dispatch	168.625
Air Tactics F-1	166.675
Air Tactics F-2	169.150
Air Tactics F-3	169.200
Common Air to Ground F-4	170.000
Logistic F-1	414.650
Logistics F-2	415.400
Logistics F-3	415.500
Region 5 Calling	169.125
Fire Cache	169.925

Contributed by Loyd Reedy

Last year there was an "Invasion of The Warbirds" at Tracy Municipal. Here are the freqs that were used last year: TOWER 121.200; GND 125.000; EVENTS/PARKING 49.085; EVENTS 149.15; SOUND& COORDINATION 151.625; AUXILIARY 154.570; CTAF 122.900; STOCKTON APP 123.85; OAK CTR 126.85 (was coordinating some sky divers); TRACY PD 155.370; TRACY PD 154.310; PARAMEDICS 155.160; To get to the Tracy airport from the Bay Area: Take 580 East to 205 East and get off at the Tracy Blvd exit (City Center). Head south on Tracy Blvd till you think you've gone too far and then go some more. The airport is on the far south side of town on Tracy Blvd on the righthand side. Check local airshow schedules for the dates this year. Submitted by Bruce Ames (BASE 108) & Richard Tidd (BASE 446)

Check out Kaiser Hospital on 464.525 (Oakland) and 464.775 (Hayward).

Here are the freqs used at last year's Livermore Air Show: TOWER 118.10, 368.70; GND 121.60; UNI 122.95; RIDE COPTERS 123.025; SHOW PERFORMERS 122.85, 122.95; AIR BOSS 128.20; CAP 148.125; TRUNKING FOR SHOW SUPPORT POLICE, FIRE 856.9625, 857.9625, 858.9625, 859.9625, 860.9625; LG 155.955. To get to the Livermore airport from the Bay Area: Take 580 East to Livermore. The Livermore Wings for Charity Airshow 1994 is September 10 & 11. Call (510) 449-2012 for more information. Submitted by Richard Tidd (BASE 446)

Rod Smith BASE 12 Public Safety Editor reports: "We had a 10851 chase on the Flea Market property. We recovered the car but the guy got away. 12:30 Thurs Morning (June 2) as I was getting off duty.

I guess the guy stole the car and thought he would help himself to some stuff at the Flea Market, but we caught him at it and chased him around the Market for awhile. He finally crashed the car and took off over a fence. I even got to use my Radio to call SJPD on CH-7 (460.025)... What a night..." Here are the frequencies in use at the San Jose Flea Market (one of the largest in the U.S.)

154.600	Control
154.515	Maintenance
151.625	Snack Bars
151.805	Parking
154.570	Security

Frequencies used at last October's Salinas Airshow. Canadian Red Arrows Formation air-air 129.9; Red Arrows Display 243.5; Red Arrows formation 243.45; Tower 119.4, 239.3; Gnd 121.7; Unicom 122.9; Show Narration 123.13, 126.4; Show 461.1375; (Ch 1) 461.5125; Airboss (Ch 2) 464.625; security 464.55 461.6875 460.7125 460.25 462.3125; 164.175-air security; 163.462-security police 1; Coors Silver Bullet 122.925. The USN Blue Angels will appear at Salinas this year on October 15 & 16.

If you ever want to know why your neighborhood is overflowing with San Jose Police cars and their helicopter is overhead, just call the San Jose Air Support Unit at (408) 277-5424. They generally will be able to share some of the details of their missions. Per Government Radio Systems Special Supplement for Golden Gate Area: Air One (Idaho 1) is on 123.025 and the Aero Support Unit is on 123.125

CITY OF SUNNYVALE SUPPORT SERVICES - SUB-ELEMENTS OF GENERAL PLAN

from C-MSG Weighting System ©

Emergency Communications

The provision of emergency services in a timely, effective and efficient manner is dependent upon a responsive, knowledgeable Communications Unit equipped with up-to-date information systems. The Department of Public Safety has employed appropriate technology to support the deployment and tracking of police and fire units and to provide the statistical basis for monitoring the effectiveness of emergency services.

Radio Communications

The Public Safety Communications Center is located at Public Safety Headquarters. It is staffed twenty-four hours a day year round. A minimum of three dispatchers are on duty at all times. All dispatchers are able to perform a multitude of tasks from any of four dispatch positions. Normally, one dispatcher is designated primary, another back-up and the third as complaint taker. All dispatchers must perform any or all of these tasks as necessitated by workload.

The primary dispatcher is responsible for monitoring the police frequency, dispatching calls for service, status keeping and updating of case assignments. The secondary, or back-up position, is primarily responsible for data base entries and inquiries, outgoing telephone calls, and monitoring the fire frequency. The call taker position is primarily responsible for all incoming telephone calls, including calls for service for any functional Public Safety Unit or other City Department as required.

The implementation of the state-wide 911 system has greatly enhanced the speed of emergency response. callers are able to dial the three digits anywhere in the state and the call will be directed to the appropriate Public Safety Answering Point. When the call comes in to Emergency Communications, the telephone number and address of the location for the calling party are displayed on the console. This gives the dispatcher an additional check for accuracy of reported information and also allows for emergency response even when the calling party is unable to give the location to the dispatcher.

An aging population means increased calls for emergency medical service. Dispatchers must be able to assess the situation and dispatch units to respond to a variety of medical emergencies.

Further improvements which have been implemented for the safety of the public are a

state-wide translation service which provides translators in a wide variety of languages on an around-the-clock basis. The Department also has the ability to communicate with the hearing impaired.

Vital to emergency communication are the radio frequencies used to maintain contact with one another. There are several radio frequencies used by the Department for emergency communication. The Public Safety system has full duplex capabilities as opposed to a simplex system. A duplex system allows two-way communication while a simplex system only allows communication in one direction at a time.

In addition to the police and fire radio channels (frequencies) that can be broadcast individually or simultaneously to both Patrol and Fire personnel, the Department has tactical and mutual aid channels as well. The tactical channel functions as the secondary police or fire frequency when the primary frequency is being used for an emergency or the Investigations Unit may use it while on a special investigation. The Department is also licensed to transmit data on a fourth duplex frequency. The Mobile Data Terminals in emergency vehicles transmit and receive on that channel. The City's other Departments also use radios in their day-to-day operations. Public Safety's Emergency Communications personnel monitor this frequency during business hours for emergency purposes. However, after hours and on weekends, the dispatchers are responsible for monitoring the frequency and dispatching.

Emergency Communications is also responsible for monitoring three (3) mutual aid frequencies; the Santa Clara County Law Enforcement Mutual Aid Communications system (SCCLEMACS 482.3375), California Law Enforcement Mutual Aid Radio System (154.920), and the State Fire Mutual Aid frequency (154.280). SCCLEMACS is used regularly by the Investigations Unit when they are working with other county agencies on a particular case, i.e., a large drug raid where all search warrants need to be executed at the same time.

In addition to the fixed positions in the Dispatch Center, the Department has a Mobile Emergency Communication Van (CommVan). This unit is completely self contained and has the radio equipment necessary to function as a radio communication facility should the Headquarter's facility become untenable. Should it become necessary to shift operations to the CommVan, there are operational plans that would establish a temporary communications link between the CommVan and functional telephone lines.

Digital Communications

The original basis for the concept of using a computer in the dispatching process was one of speed and accuracy in processing calls for service. The computer compiles information input by dispatchers and records all calls for service and all officer activity reported from the street, giving a visual record of calls assigned. This compilation is a reasonably complete record of the measurable workload, its distribution over time and area and the amount of time each officer or Unit spends on each call. As a result, it is possible to determine what part of the total time is available for preventive patrol by beat and time of day. In addition, the total time spent conducting different types of fire activities can also be captured. All of this information is retained in the Department's Computer Aided Dispatch System (CAD). Thus all the basic management information that is difficult to compile manually is electronically manipulated to be available in a more timely, cost effective basis.

The Department is in the process of developing an upgraded CAD and, in conjunction with this, will be replacing the current Mobile Data Terminals (MDT) with models capable of processing much more data. The MDT's will interface with the CAD and Records Management files, thus giving the officers access to that data and, in addition, the officers will be able to do online report entry from the field. This will not only give immediate access to report information, it will also eliminate to a great degree data entry by clerical staff. The timeliness and efficiency of this procedure are evident with the added advantage of eliminating a considerable amount of paperwork and storage.

The officer on a beat receives access to the various automated systems via CAD, which is linked to these systems through the California Law Enforcement Teletype System (CLETS) at the county. Once the digital message is transmitted, it is routed to the requested automated system, county, state

or national, via the switches. The requested information is then returned to the unit requesting it, which could be the mobile unit, dispatcher, or Records Unit terminals.

The Comprehensive Public Safety System (CPSS) is developed around a data base concept and this data base is composed of every activity or occurrence that is reported to, or occurs within, the Department. In CPSS, when a call is received by Communications, an initial entry is made into the data base, and from this initial entry on, information continues to accumulate in the data base as it becomes available to Central Records. In addition, any historical information which might already reside in the data base can be retrieved for the officer in the field (via radio). Using the data base concept allows for a much more rapid and accurate method of retrieving information for preparing statistical reports or displays of related information, because data bases do not require sequential reading or sorting prior to the information being used.

Both the CPSS and CAD systems are designed for ease of operation by all operators including the dispatchers. Rather than the dispatcher having to make several inquiries to different automated systems, the CAD system automatically does it with just a single inquiry into the CPSS data base. When a vehicle license is entered, a search will be made internally on the vehicle file. If no match is obtained, an inquiry will be sent to the County/State/NCIC system. A message will be displayed on the primary screen if either of these lead to a stolen or wanted vehicle.

Future Issues in Emergency Communications - Technological Advances Will Continue

The advancements made in telecommunications technology during the past decade have been significant and have greatly enhanced emergency communications in the Public Safety sector. Communication can be highly sophisticated, but the purpose is still the same. You must get a message from one person to another or from one point to another. The advancements made during the next decade may very well surpass all of those made during the past three decades.

The advancements appear to be in all areas of telecommunications from hardware to microwave. In the area of hardware, equipment that is much smaller and more powerful with multiple applications being performed will be commonplace. A lot of this will happen because of the advancements made in the electronics field. As an example, in the future, portable radios will have several uses, one of which will be the capability of being used as a telephone. When this is accomplished, several things will occur. Officers in the field will be able to make follow-up telephone calls without having to return to Headquarters. This will free up some of the dispatchers, Desk Officers, and Records Clerks who will be able to do other things, plus it will open up, to a degree, the radio frequency.

Advancements are also being made in the area of Automatic Vehicle Locators (AVL). There are several systems available at this time. In the future, an AVL system will be capable of not only locating an individual unit but will be used by the unit as a map showing the best route of travel to a particular location or will be capable of showing a floor plan of a building which can be used in emergency or tactical situations.

Increased Reliance on the Telephone

The use of mobile cellular telephones is another area that has suddenly started to expand. Coverage, reliability and technological advances have extended the telephone capabilities that are normally associated with a fixed location to virtually anywhere in the Bay Area. Just what impact this trend will have upon radio communications is unclear at the moment. As noted above, there is a distinct possibility that increased usage of mobile telephones in non-emergency situations could result in a slight decrease in radio communications transactions.

Unavailability of Radio Frequencies for Expansion

Radio channels are becoming an increasingly scarce resource coupled with increased radio traffic and increased calls for service, each channel is becoming saturated. During some peak periods, officers are having to wait for a clear channel before they can transmit. Other agencies are currently experiencing intolerable delays, especially during emergency situations.

Digital communications are relatively new to Public Safety. As in any field, the technology changes so rapidly it is hard to keep up with it all. The electronics field is a prime example.

CPSS is designed for future needs of the Department. The system will be able to interface with other devices, including bar code equipment, Automatic Vehicle Locators (AVL), crime analysis, graphics and plotters for fire prevention/firefighting activities, etc. Advances in technology are allowing these items to be made smaller, faster and less expensive with a capacity for performing many more functions.

Monitor Sunnyvale on 482.9625 483.1625 PD, Mutual Aid 482.3375, 482.7125 Fire, Fire TAC 482.4125, Public Works 453.800. By the way, be careful of your speed through the City of Sunnyvale. They are using a "civilian" red Thunderbird for traffic violations. This T-Bird has fold-down lights on the passenger visor. There are no indications that this is a Sunnyvale PD vehicle. I've seen it on two traffic stops in the Homestead-"Birdland" area of Sunnyvale over the past two months.

The National Fire Protection Association announced that they have learned of numerous incidents where interference to hospital smoke alarms have been caused by cellular telephones. Some hospitals have banned the use of HTs and cellular phones in their buildings. According to the article, it appears that false alarms are triggered by rectification of VHF-UHF signals and internal dust. Some of the newer systems are not as susceptible but still may be triggered by stray RF.

The NRHS Grand Canyon Chapter & the Grand Canyon Railway will hold a **Railfan Weekend** 9/30 & 10/1-2. This will feature newly restored locomotive #4960 and an excursion train to the Grand Canyon. Photo run-bys, night photo session, tour of the locomotive shop & more. Tickets start at \$59. Contact the Grand Canyon NRHS, PO Box 391, Williams AZ 86046 for more info. Grand Canyon uses 160.350 for Road & repeater, 160.485 & 160.830 for yard. 157.680 for misc. Bruce Ames Editor

K40 Electronics out of Elgin Illinois is marketing a new Traffic Laser Protection System that they call the **Defuser™**. The system mounts inside a specially designed but quite ordinary-looking license plate frame which is made of GE Lexan®. A small LED mounted in your instrument panel tells you that the system is working. A police radar laser gun transmit invisible infrared light waves that are directed in a very narrow beam to a single car. The light waves strike the car and are reflected back to the laser gun, which calculates the speed. Police typically aim low and toward the center of the car so the laser beam strikes a reflective surface, such as the license plate, where your *Defuser* is on duty. The *Defuser* sends out a constant signal, one that literally beats the police laser's signal back to the laser gun. This deactivates speed measurement by the officer. He is simply unable to determine your speed. According to the literature I received, K40 is so sure of the *Defuser* technology, that they make a double guarantee: if police laser catches you while your *Defuser* Laser Protection System is operating, they will pay you double the cost of your fine with no questions asked. They offer a 12 month replace or repair warranty. Call K40 at (800) 225-8695 for more information.

PIMA AIR & SPACE MUSEUM by Bruce Ames Travel Editor

If you are in the Tucson (Arizona) area, stop for a visit at the Pima Air and Space Museum, just south of Davis-Monthan AFB. Their aircraft collection ranges from an exact full-scale replica of the Wright Flyer to the mach three-plus SR-71 Blackbird. Their collection of aircraft now numbers over 180 and indoor exhibit space exceeds 100,000 square feet. Also on exhibit, you will find a B-29 and a B-17G. The Museum also features space artifacts and exhibits. The Pima Air and Space Museum's Titan Missile Museum is 20 minutes south of the city in Green Valley. By 1987 all Titan II complexes were taken off alert, dismantled and destroyed except for 571-7 which is now leased from the Air Force and is the Titan Missile Museum. You get to see the actual control center and see demonstrations of the round-the-clock monitoring and procedures for the count-down. The tour features a walk through the 200 foot long cableway 35 feet underground to the 146-foot deep silo that contains the actual Titan II missile. On view is the 430,000 lb-thrust first stage engine. This engine was so powerful that it could propel the 330,000 pound missile from launch to an altitude of 250,000 feet in just 2½ minutes. Call (602) 574-9658 for more information. While in the area, monitor David-Monthan AFB (the Air Force

airplane graveyard) on 271.3 339.1 App/Dep; ATIS 270.1; 363.8 App; 297.2 318.1 CInc; 253.5 TWR; 163.125 163.175 163.475 164.9875 173.425 Security Police.

PUBLIC SAFETY COLUMN by Rod Smith Base 12 Public Safety Editor

TOURS START-UP AGAIN! The CDF Tour for July 23rd at 10am will be at the California Department of Forestry Station at 15670 South Monterey Rd, Morgan Hill, Calif. Go south on Hwy 101 take Cochrane Rd West, when you get to Monterey Rd, turn left and go south. Until you get to 15670 Monterey Rd. It will be on the left side. You will see a big fire house, and a large sign which says, Calif. Dept. Forestry. You will need to contact Rod Smith, BASE 12 the Public Safety Editor as we are limited to 40 people. So if you want to go, see me at the meeting to sign up, or call me at (408) 243-6579. The first 40 people to sign up are going. If you don't make the list this time we will schedule another tour later on early next year. Rod Smith, BASE 12, Public Safety Editor

If it is summertime, it must mean time for the world famous Gilroy Garlic Festival. The Festival dates this year are July 29-31. Here are the freqs to plug into your trusty handheld scanner.

464.325 Gilroy Garlic Festival	464.575 Gilroy Garlic Festival
464.775 Gilroy Garlic Festival	464.825 Gilroy Garlic Festival
464.975 Gilroy Garlic Festival	
460.525 San Jose PD South	155.415 Santa Clara Cty Sheriff, Gilroy
156.210 Santa Clara Cty Sheriff	154.845 Sheriff TAC, Pacheco Pass
155.115 Morgan Hill PD	154.145 Morgan Hill Fire
154.830 Gilroy PD	155.085 Gilroy PD TAC
155.610 Gilroy PD (input)	154.340 Gilroy Fire
151.145 Santa Clara Cty Park Rangers	151.415 Dept. Fish & Game
154.920 Clemars (Sheriff Control Channel during Festival)	
453.825 State Police	42.54 CHP Gilroy
42.24 CHP Gilroy	42.50 CHP San Jose
154.280 Fire Mutual Aid	153.845 Fire, County wide Blue
154.265 Fire Mutual Aid	154.935 Clemars
151.445 CDF Morgan Hill, Command	151.400 CDF TAC
151.160 CDF TAC 2	151.325 CDF TAC 6
151.385 CDF TAC 9	154.295 Santa Clara Cty White 3
154.710 CLEARS	158.775 San Benito Cty Sheriff
154.680 Dept of Justice	

I have a new list of frequencies for your trip to San Francisco via I-280 to plug into your car scanner. This handout is available at meetings. See the Handout Manager (Tim Main) for your copy. Meanwhile, here are some freqs from that list:

488.3625 SF Fire, Downtown dispatch	460.025 SFPD Task Forces
460.350 SFPD Tactical	488.7625 SF Fire, Fisherman's Wharf area
462.950 SF City Ambulance	155.385 SF City Ambulance
462.1125 Pier 39 Security	462.1375 Pier 39 Security
151.715 Fisherman's Wharf Security	464.925 Ghiradelli Square
464.475 The Cannery	

TRAVEL COLUMN by Bruce Ames Base 108 Travel Editor

Did you know that the longest continually inhabited site in North America, from the Conquistadors to the outlaws, from the Native Americans to the Pioneers, is Tucson Arizona?

Today, one can ride on restored electric street cars that began operating in 1906 as a replacement for horse and mule-drawn streetcars. Today's streetcars travel through some of the most historic and diverse areas of Tucson, ranging from the heart of the Fourth Avenue business district

to University Avenue where one can find beautifully restored homes and the Arizona Historical Society.

Tucson is where you can also find a wild west theme park called Old Tucson Studios. Old Tucson Studios was created in 1939 for Columbia Pictures "Arizona" with William Holden. Since then, Old Tucson Studios has been the home to 300 pictures shot on location. During film production, the Studios remain open so visitors can enjoy a behind-the-scenes look into the television and motion picture industry. Here is where you can walk the same streets and film sets that John Wayne walked in "Rio Lobo", Clint Eastwood in "Joe Kidd" and where Michael Landon raised a family in "Little House On The Prairie". In Tucson, monitor the following:

Police Ops South	155.010	Ops West	155.730	Ops Midtown	154.725
Ops East	155.490	Detectives	156.030	Central & Car/Car	155.850
Detectives	154.755	Detectives	155.970	Detectives	155.640
Interagency	155.475	All use tone 192.8 except for interagency which uses 210.7			
Fire Medical	453.100	Dispatch	453.200	Fire/Hazmat	453.600
Fireground	453.250	Fireground	453.750	Fireground	453.800
All Fire uses tone of 203.5					

When I'm in Tucson, I stay at the Doubletree Hotel which uses 151.895. In the Tucson area, you'll find the Arizona Highway Patrol on 460.425 with their mobile extenders on 155.505. ATSF RR is on 161.190 with Southern Pacific and Amtrak on 161.320. SP Police use 161.400. Also used in PBX-8 on 160.890 and PBX-9 on 160.950.

Seventy miles further down I-10 and down a state route, you'll find the *Town Too Tough To Die* - Tombstone. Tombstone is the town made famous in the 1880s with Wyatt Earp, Doc Holliday, and the famous showdown and gunfight at the OK Corral. Tombstone is a living memorial to that era. You can still wander the dusty streets, see the same original buildings and walk the same elevated wooden sidewalks of that era. Most of the local restaurants advertise that "Marshall Earp Ate Here". There are numerous museums to visit including the OK Corral. A mile out of town you can visit the original Boothill Cemetery. Tombstone PD is on 39.18 and 155.025. They also use an intercity frequency of 155.830 and an interagency freq of 155.475.

The General Services Administration (GSA) publishes a free booklet titled *The U.S. General Services Administration Guide to Federal Government Sales* that lists which federal agency is selling what, procedures for sales notification, and tips on how to get a good deal. You may write to the Consumer Information Center, Pueblo CO 81009. Major sales of the U.S. Marshals Service are advertised on the 3rd Wednesday of every month in the classified section of USA Today or you can call Manheim Auctions at (800) 222-9885

OPERATION DESERT STORM 2ND UFO SHOT DOWN. (Anon off the Internet)

A high level source has revealed that an American Air Force F16 gunned down a UFO over Saudi Arabia during Desert Storm and five nations are trying to cover up the encounter. The Saudis with me were so frightened that they asked American, British and French investigators to come to the crash site immediately. A Russian Colonel says he was visiting in Riyadh at the time and that he and a small Russian team were able to inspect the wreckage before American forces from Desert Storm arrived. The craft was circular and made of a material I've never seen before, he says. About a third of it seemed to be missing, possibly blown away by the American missiles. The Saudis wouldn't let us touch anything, but we saw instruments, machinery and other things that completely baffled us. He says the markings on instrument panels and dials were not in any language he was familiar with. It seemed to be a relatively small craft, maybe 15 feet across, he says. There were three chairs, probably for crew members, but they were so small they seemed to have been made for children. Evidently space aliens are only about three feet tall. Most amazing, though, is the fact that there were no bodies at the crash site nor did there appear to be an engine in the craft. The American missiles may have scored a direct hit on the engine, causing it to disintegrate, he says. But I checked with the

may have scored a direct hit on the engine, causing it to disintegrate, he says. But I checked with the Saudi radar technicians and they claim their instruments didn't show anyone ejecting or bailing out from the craft. Search helicopters were all over the area, which is a desert, and they did not spot any survivors in the vicinity of the crash. During interviews with the radar technicians, Petrokov was told that the blip identified as the UFO appeared out of nowhere as four F16s were streaking toward Baghdad. One of the American planes broke from formation and headed for the UFO, he says. The alien craft started moving southwest, away from the F16, and the American pilot gave chase. When the F16 was within three miles, the alien craft seemed to fire something at the plane but missed. The American then fired two missiles. Both hit the saucer. There was a terrific explosion, and then the crash. When American investigators arrived, Petrokov says, he and his team were immediately ordered out of the area and flown back to Riyadh. There were things they didn't want us to see—more, I think, than the fact that the craft was circular, that there were no survivors and that it was made of a foreign substance, he says. Petrokov says members of his team were able to sneak pictures without the knowledge of the Saudis or Americans, but he was ordered to turn them over to Russian authorities the next day. Petrokov says American Army engineers gathered up all debris and carted it away for shipment to the U.S.

The Blue Angels will not appear at this year's Seafair in Seattle August 6-7. Officials say that this will cost the area \$500,000 in sales. The Defense Department cancelled the Blue's appearance after the FAA refused to allow the performance team to fly over Lake Washington due to congestion in the area.

The FAA has ordered greater separation between 757s and following aircraft. This announcement is due to two 757 wake-turbulence incidents that killed thirteen people. Aviation experts say that the 757 unique wing design causes stronger wake-turbulence than is typical for an aircraft of its size. Beginning July 1, smaller aircraft following 757 jets must stay at least four nautical miles in trail instead of the current three. As of February, the U.S. jet fleet is made up of 8% 757s or 388 aircraft.

Our Public Safety Editor, Rod Smith (BASE 2) sent in Coast Guard frequencies for San Francisco:

157.100	Patrol & Rescue	156.800	Calling & Emergency
157.150	Patrol & Rescue	157.175	C.G. Auxiliary
164.550	Law Enforcement, Coastal	164.9125	Law Enforcement, Coastal
165.3375	Law Enforcement, TAC	165.5625	Law Enforcement, TAC
123.100	Search & Rescue	156.300	Search & Rescue
162.225	Emergency Transportation	148.305	C.G. Auxiliary
237.900	Search & Rescue	282.800	Search & Rescue
381.800	Air Support Primary	353.900	Enforcement

BATTERIES PART 1 by Richard Tidd (BASE 446)

Batteries, batteries, where are my batteries? We use them, abuse them, recharge them, toss them, but do we really understand them? This series will serve (I hope) to enlighten you on the why's, wherefores, care and feeding of those energetic little darlings we use everyday and cannot live without..

First off, lets play *Jeopardy*®. We have three contestants, BASE1006, a Vulcan with a hyper active thyroid, BASE1444, Klingon in drag, and BASE2286, a house wife with 2.8 kids from Podunk New Jersey. We all know how the game is played. I will give the answer and the contestants give the answer. The first contestant to ring the bell will try first.

The categories are Chemical Reactions, Atomic Physics, Cartoons, and Where Do Socks Go. So we pick Chemical Reactions for \$500 and the answer is Allesanaro Volta. (Buzz)--Base1444--Who is the Inventor of baking soda? No, not correct, (after a short pause-buzz)--Base1006--Who is the inventor of diaper rash? No, not correct, (buzz)--Base2286--Who is the inventor of the battery? Yes and you get \$500.

By the way, if anyone knows where socks go, please let me in on it!!!!

A Short Battery History

Even to the late 18th century, electricity was still a mystery. We all know of Benjamin Franklin's run in with a lightning storm. While conducting an experiment by flying a kite in a thunder storm, he noticed that as the lightning struck the kite, the key he had attached to the wire string glowed. He continued his own studies into electricity, while others continued theirs.

Among the many who were fascinated with electricity was Alessandro Volta. Like Alexander Graham Bell a century later, Volta worked long hard hours in his experiments. After many an experiment, in about 1789, he came across a chemical reaction copper and zinc rods were immersed in a solution of acetic acid. The acid ate away the zinc rod, while nothing appeared to happen to the copper rod. Ah, but something was happening with the copper rod. The copper rod captured energy released from the action. The reaction produced what Volta called voltage (or volt, our unit for electrical pressure or electromotive force developed between the two electrodes). The copper rod as it turned out was the positive electrode while the zinc rod was the negative electrode. Volta basically found that a battery can be made by taking two dissimilar metals and immersing them into an active solution. This will then cause electrons to flow, creating a current with a voltage. He then defined the electrochemical principles that became the foundation for the common battery we all know and love today.

It was not until about 1868 that the first practical cell was developed however. Manganese-dioxide powder was used as the positive electrode and zinc as the negative electrode. These were immersed into a solution of ammonium chloride in water as the electrolyte. These contents were bottled into a glass jar and became the first wet battery.

The first dry (not necessarily all dry) cell battery was manufactured in about 1888. This first dry cell battery was to become the prototype for the dry cell battery we use today. It was packaged in a zinc case. This however, led to extensive corrosion when this battery was inactive. Only after extensive experimentation was a solution found. Zinc chloride was added to the electrolyte and was effective enough in reducing the corrosion. This resulted in a longer battery storage life whereby about 1890, mass production of this new battery was undertaken by what later became Union Carbide.

From 1890 to the mid 1960's, the basic dry cell battery remained relatively unchanged with only minor changes in design and performance. This however was not to continue as the old saying that necessity is the mother of invention had its hand here too. The new frontier of space along with increasing demands in the medical field (particularly for pacemakers), combined with other industrial needs, forced a reevaluation in the battery industry. Since then, batteries have been literally been re-invented with fresh designs and improvements. New combination of ingredients have resulted in Lithium, NMHD (nickel-metal hydride), Nicads (nickel cadmium) and button cell batteries, just to name a few. For example, a small button battery can power a watch for 5 years; a Lithium battery can keep a person alive for years by powering a pace maker. Rechargeable Nicads can be reused over and over. Our society has come to not only enjoy the battery, but also rely on them to help power our lives. No part of our lives is without a battery in it.

HOW A TYPICAL BATTERY WORKS

A typical battery consists of a can made of zinc. Inside the can is an electrolyte separator which is saturated with an electrolyte paste. A carbon rod is in the center of the can. The space all around is filled with manganese-dioxide cathode mix. These are the basic ingredients that will supply the power inside the battery. In short, a battery consists of a chemical mix housed in a case, that produces a reaction creating a current that can do work when connected to a load (radio).

Nothing lasts for ever, and neither does a battery. As energy is used, the effectiveness of the basic battery ingredients diminish. The zinc becomes thinner while the reaction between the zinc and the electrolyte produce by-products. The batteries voltage diminishes and performance is curtailed as these by-products build up. The result is a gradual (almost linear) decline in voltage.

For interest as to the relative simplicity of the basic battery, a MacGiver episode shows MacGiver sticking a copper wire and a silver wire into a plant to power a radio. This can in fact be

done. Plants with a lot of moisture such as succulents work best in supplying a low voltage and current source. Other methods I have seen use a potato.

A real life example of a living battery can be found in Foster City, under ground. Would you believe that many residents in Foster City are literally sitting on a battery? Foster City is a land fill city. The salt water is not that far below the surface. Electrolysis between the foundations and the ground eat away at the foundations. Additionally, if you were to place two plates of dissimilar metals in the ground you will have current flowing. This was reported in the newspaper.

SOME FACTORS THAT INFLUENCE BATTERY PERFORMANCE

There are several factors that influence battery performance. Factors such as the type of battery, its size (capacity), rate of current discharge, operating temperature, and internal resistance are among the list.

Most battery's will operate until the voltage diminishes to what is called the cutoff voltage. Cutoff voltage for a typical 1.5 volt battery may range from 1.1 volt down to 0.65 volt depending on the device it is powering.

Capacity is the battery's power potential. Capacity is determined by the relative length of direct use in powering your radio and the time at rest. This is called the duty cycle. You can achieve a longer run time if you turned off your radio periodically. This allows the battery to rebuild some of it's energy. While this is true, I will bet that not many of us do this (I don't). I don't want to miss any action.

Most batteries are designed to be used at room temperature. A battery's energy output is directly related to temperature. In short, a warm battery will produce more energy than a cold battery. But don't get carried away with this for high temperatures reduces storage life. Storing batteries in the refrigerator is perfectly OK and encouraged to increase the shelf life, however, repeated low to high temperature cycling will shorten shelf life. I have never had any problem in using Energizers™ or Duracells™ right out of the refrigerator in running anything. These higher grade batteries can do a great deal of work even when cold.

That is it for this time. Stay tuned on this frequency for part 2 which will cover types of batteries etc.

A Meriden (CT) charter company, Meriden Aviation Services, is refitting a six-seat Piper Cherokee with a bed, curtains and stereo and will start offering hour-long romance flights for \$220. Included in this cost is a bottle of champagne, a red rose and a gold pin signifying membership in the "Mile High Club." Love is in the air?

LATEST PUBLISHED AIRLINE STATISTICS

Airline	Flights Arrived on Time	Complaints per 100,000 Flyers
Alaska	84.6%	N/A
America West	82.0%	1.31
American	85.3%	0.84
Continental	72.5%	1.87
Delta	81.3%	0.37
Northwest	87.6%	0.69
Southwest	89.6%	0.17
TWA	83.1%	1.75
United	84.6%	0.64

USAir	77.9%	0.54
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Source: Department of Transportation

Here are some new bulletin boards for you to check out that are specifically radio related:

Commtronics	(619) 578-9247
U.S. Scanner News	(206) 695-0678
A.R.R.L.	(203) 666-0578

The FCC is reporting that it's backlog in April for amateur licensing was 10-12 weeks despite their new computer system. Based on recent BASE Club experience, it took just slightly less than ten complete weeks for new license processing. By the way, you must be using the new-style Form 610 as of March 1.

NEW UAL LDOC by Jean Baker BASE 637 via Marilyn Mayer Collins Radio, callsign "Cedar Rapids", will operate the following LDOC frequencies over Northern Canada to support United's Chicago/New York trips to the Far East: 6637, 8933, 10075, 13348, 17490, and 21964. (All freqs in KHz)

The FCC now has new vehicles for investigative work. The units will have a mobile phone, 2 PCs with color monitors and even a satellite receiver. The FCC says that they will have ten such vehicles in service this summer. Their goal is to have two such vehicles for each of their 35 field offices. These units will be targeting unlicensed transmitters used by boat operators and businesses.

The following article is shared for your entertainment and information use only. The BASE Club does not have personal knowledge as to the validity of the information or to the lucidity of the author.

OPERATION MAJORITY by Milton William Cooper

This file contain the absolute true information regarding the alien presence on earth and the US Governments involvement with the aliens. This file contains only the information as I saw it and only my information. It does not contain any information from any other source.

It was necessary for me to issue the information previous to this release in a manner which would deceive the Government until someone was able to independently confirm my identity, my employment, my service record, my intelligence background, the identity of the person to which I gave the information to in 1972, his acknowledgment of the information and when it was given to him, that the information is correct, that I have not seen him since 1974, and that I have not communicated with him in any form since 1976. This was necessary because this file is my death warrant if MJ-12 continues to operate in a manner consistent with its history.

The original information that I first released was not much different than what you will find here. Only some names were different and just enough (I hoped) to convince MJ-12 and MAJI that I was not a threat long enough to have independent verification of the facts before I risked death. I wish to make it absolutely clear that I do not consider myself a hero. I believe that most of you would do the same thing if you knew the truth. I gave an oath that I would uphold and protect the Constitution of the United States of America and I take that oath very seriously. I am doing no more now than I did when I fought in Vietnam. I am doing my duty.

Please make copies of this file and send it to your Congressman, your Senator, the Attorney General of the United States, and to the Supreme Court. Send it also to everyone you know. Attach copies of the Bill English file and John Lears file. Send anything else you may have which tends to support the information.

I Milton William Cooper, do solemnly swear that the information contained in this file is true and correct to the best of my knowledge. I swear that I saw this information in 1972 in the

performance of my duties as a member of the Intelligence Briefing Team of the Commander In Chief of the Pacific Fleet as a Petty Officer in the US Navy. I swear that I underwent hypnotic regression in order to make the information as accurate as possible. I swear that I can and will take a lie detector test or any other test of any reputable persons choosing in order to confirm this information. I swear that I can and will undergo hypnotic regression conducted by any reputable and qualified Doctor of any reputable persons choosing in order to confirm this information. I will not, however submit to any test or hypnosis by anyone who is now or has ever been connected with the Government in any capacity for obvious reasons.

The following is brief listing of everything that I personally saw and know from 1972 and does not contain any input from any other source whatsoever.

MAJESTY was listed as the code word for the President of the United States for communications concerning this information.

OPERATION MAJORITY is the name of the operation responsible for every aspect, project, and consequence of alien presence on earth.

GRUDGE contains 16 volumes of documented information collected from the beginning of the United States investigation of Unidentified Flying Objects (UFO's) and Identified Alien Crafts (IAC). The project was funded by CIA confidential funds (non-appropriated) and money from the illicit drug trade. Participation in the illegal drug trade was justified in that it would identify and eliminate the weak elements of our society. The purpose of project GRUDGE was to collect all scientific, technological, medical and intelligence information from UFO/IAC sightings and contacts with alien life forms. This orderly file of collected information has been used to advance the United States Space Program.

MJ-12 is the name of the secret control group. President Eisenhower commissioned a secret society known as **THE JASON SOCIETY (JASON SCHOLARS)** to sift through all the facts, evidence, technology, lies and deception and find the truth of the alien question. The society was made up of 32 of the most prominent men in the country in 1972 and the top 12 members were designated MJ-12. MJ-12 has total control of everything. They are designated by the code J-1, J-2, J-3, etc all the way through the members of the Jason Society. The director of the CIA was appointed J-1 and is the Director of MJ-12. MJ-12 is responsible only to the President. MJ-12 runs most of the worlds illegal drug trade. This was done to hide funding and thus keep the secret from the Congress and the people of the United States. It was justified in that it would identify and eliminate the weak elements of our society. The cost of funding the alien connected projects is higher than anything you can imagine. MJ-12 assassinated President Kennedy when he informed them that he was going to tell the public all the facts of the alien presence. He was killed by the Secret Service agent driving his car and it is plainly visible in the film held from public view. A secret meeting place was constructed for MJ-12 in MARYLAND and it was described as only accessible by air. It contains full living, recreational, and other facilities for MJ-12 and the JASON SOCIETY. It is code named "THE COUNTRY CLUB". Only those with TOP SECRET/MAJIC clearance are allowed to go there.

MAJI is the MAJORITY AGENCY FOR JOINT INTELLIGENCE. All information, disinformation, and intelligence is gathered and evaluated by this agency. This agency is responsible for all disinformation and operates in conjunction with the CIA, NSA, and the Defense Intelligence Agency. This is a very powerful organization and all alien projects are under its control. MAJI is responsible only to MJ-12.

SIGMA is the project which first established communications with the aliens and is still responsible for communications.

PLATO is the project responsible for Diplomatic relations with the aliens. This project secured a formal treaty (illegal under the Constitution) with the aliens. The terms were that the aliens would give us technology. In return we agreed to keep their presence on earth a secret, not to interfere in any way with their actions, and to allow them to abduct humans and animals. The aliens agreed to furnish MJ-12 with a list of abductees on a periodic basis.

MAJIC is the security classification and clearance of all alien connected material, projects, and information. **MAJIC** means **MAJI** controlled.

AQUARIUS is a project which compiled the history of alien presence and their interaction with *Homo Sapiens* upon this planet for the last 25,000 years and culminating with the Basque people who live in the mountainous country on the border of France and Spain and the Syrians. **GARNET** is the project responsible for control of all information and documents regarding this subject and accountability of the information and documents.

PLUTO is a project to evaluate all **UFO/IAC** information pertaining to space technology.

POUNCE is the project formed to recover all downed/crashed craft and aliens.

REDLIGHT is the project to test fly recovered alien craft. It is conducted at **AREA 51 (DREAMLAND)** in Nevada. It was aided when the aliens gave us craft and helped us fly them. The initial project was somewhat successful in that we flew a recovered craft but it blew up in the air and the pilots were killed. The project was suspended at that time until the aliens agreed to help us.

SNOWBIRD was established a cover for project **REDLIGHT**. Several flying saucer type craft were built using conventional technology. They were unveiled to the press and flown in front of the press. The purpose was to explain accidental sightings or disclosure of **REDLIGHT** as having been the **SNOWBIRD** craft.

LUNA is the alien base on the far side of the Moon. It was seen and filmed by the Apollo Astronauts. A base, a mining operation using very large machines, and the very large alien craft described in sighting reports as **MOTHER SHIPS** exist there.

NRO is the National Recon Organization based at Fort Carson, Colorado. It is responsible for security for all alien or alien craft connected projects.

DELTA is the designation for the specific arm of the **NRO** which is especially trained and tasked with security of these projects.

JOSHUA is a project to develop a low frequency pulsed sound generating weapon. It was said that this weapon would be effective against the alien craft and beam weapons.

EXCALIBUR is a weapon to destroy the alien underground bases. It is to be a missile capable of penetrating 1000 meters of Tufa/hard packed soil such as that found in New Mexico with no operational damage. Missile apogee not to exceed 30,000 feet AGL and impact must not deviate in excess of 50 meters from designated target. The device will carry a 1 megaton nuclear warhead.

ALIENS, there were 4 types of aliens mentioned in the papers. A **LARGE NOSED GREY** with whom we have the treaty, the **GREY** reported in abductee cases that works for the **LARGE NOSED GREY**, a blond human like type described as the **NORDIC**, a red haired human like type called the **ORANGE**. The home of the aliens were described as being a star in the Constellation of Orion, Barnards star, and Zeta Reticuli 1 & 2. I cannot remember even under hypnosis which alien belongs to which star.

EBE is the name or designation given to the live alien captured at the 1949 Roswell crash. He died in captivity.

KRLL OR KRLL OR CRLL OR CRLL pronounced Crill or Krill was the hostage left with us at the first Holloman landing as a pledge that the aliens would carry out their part of the basic agreement reached during that meeting. **KRLL** gave us the foundation of the yellow book which was completed by the guests at a later date. **KRLL** became sick and was nursed by Dr. G. Mendoza who became the expert on alien biology and medicine. **KRLL** later died. His information was disseminated under the pseudonym **O.H. Cril or Crill**.

GUESTS were aliens exchanged for humans who gave us the balance of the yellow book. At the time I saw the information there were only 3 left alive. They were called (**ALF's**) Alien Life Forms.

RELIGION The aliens claim to have created *Homo Sapiens* through hybridization. The papers said that **RH-** blood was proof of this. They further claimed to have created all of our major

religions. The showed a hologram of the crucifixion of Christ which the Government filmed. They claim that Jesus was created by them.

ALIEN BASES exist in the four corners area of Utah, Colorado, New Mexico, and Nevada. Six bases were described in the 1972 papers, all on Indian reservations and all in the four corners area. The base near Dulce was one of them.

MURDER The documents stated that many military and government personnel had been terminated (murdered without due process of law) when they had attempted to reveal the secret.

CRAFT RECOVERIES The documents stated that many craft had been recovered. The early ones from Roswell, Aztec, Roswell again, Texas, Mexico, and other places.

GENERAL DOOLITTLE made a prediction that one day we would have to reckon with the aliens and the document stated that it appeared that General Doolittle was correct.

ABDUCTIONS were occurring long before 1972. The document stated that humans and animals were being abducted and or mutilated. Many vanished without a trace. They were taking sperm and ova samples, tissue, performed surgical operations, implanted a spherical device 40 to 80 microns in size near the optic nerve in the brain and all attempts to remove it resulted in the death of the patient. The document estimated that 1 in every 40 people had been implanted. This implant was said to give the aliens total control of that human.

CONTINGENCY PLAN SHOULD THE INFORMATION BECOME PUBLIC OR SHOULD THE ALIENS ATTEMPT TAKEOVER. This plan called for a public announcement that a terrorist group had entered the United States with an Atomic weapon. It would be announced that the terrorists planned to detonate the weapon in a major city. Martial Law would be declared and all persons with implants would be rounded up along with all dissidents and would be placed into concentration camps. The press, radio, and TV would be nationalized and controlled. Anyone attempting to resist would be arrested or killed.

CONTINGENCY PLAN TO CONTAIN OR DELAY RELEASE OF INFORMATION This plan called for the use of MAJESTIC TWELVE as a disinformation ploy to delay and confuse the release of information should anyone get close to the truth. It was selected because of the similarity of spelling and the similarity to MJ-12. It was designed to confuse memory and to result is a fruitless search for material which did not exist.

SOURCE OF MATERIAL CONTAINED IN THE DOCUMENTS WHICH I SAW The source of the material was an ONI counter intelligence operation against MJ-12 in order for the Navy to find out the truth of what was really going on. The Navy (at that time or at least the Navy that I worked for) were not participants in any of this. The different services and the government conduct this type of operation against each other all the time. The result of this operation was that the Navy cut themselves in for a piece of the action (technology) and control of some projects.

History will be the judge of me and this information and I have no fear of that judgement. I swear that this information is true and correct to the best of my knowledge.

I wish to thank all those people who have aided me in reaching this point and for their patience and understanding. I owe you all more than I can ever repay.

Finally, it does not matter who is right and who is wrong or if a project name is in the wrong place. It does not matter who is working for who or what is really what. It should be obvious by now that something sinister and terribly wrong is going on involving the government and the UFO phenomenon. We must all band together and expose it now. I have done my part in the best manner that I could. I can add nothing else except my testimony in Congress or a court of law that what I saw and have written in this file is true and that I saw it.

There will be no further additions or corrections to this information either now or in the future. My file is complete and stands to be judged by history. Sometime in the future the exact papers that I saw will surface and you will all see this exact information contained within them.

Milton William Cooper

The U.S. Air Force is going to face another budget cut, the ninth in the last ten years. They will drop in the FY-95 year, 184 airplanes giving them a total of 7,009 in their inventory. They plan to cut one wing of F-16s and a half-wing of F15Cs. Here are some interesting facts about the Air Force:

Active duty end-strength will be 400,051. High was 1986 Cold War level of 608,200 or a loss of 208,149

Further cuts by 1999 to 390,000

The Air Force operated 52 large installations in 1989. That number is now 29 and will soon drop to 21

Last time the force strength was so low was during the Berlin Airlift in 1948

NEW CARGO CARRIER AT SFO by Marilyn Mayer BASE 327 Aviation Editor

Bruce Ames and I have both seen a 747 cargojet at SFO recently with "American International Airways" side logo. The tail features alternating vertical stripes of red, orange, and yellow. Richard BASE 595 provides us information on this carrier. American International Airways is a all-cargo airline based in Detroit. The smaller title on the plane was "Kalitta" which comes from the airline's former name which was Kalitta Flying Service. They just recently changed their name to American Int'l. They have a fleet plus some 747's, 727's and DC9's. I believe most of there business is flying auto parts in and out of Detroit. I am not sure about what routes they fly but I have regularly seen their DC-8's at Oakland. They use the call sign of "Connie" on the radio which comes from the owner's first name (Connie Kalitta). I was not aware that their 747's have been visiting SFO.

The B-2 bomber now has an official name - *Spirit*. Air Combat Command and the prime B-2 contractor, Northrup, held the naming ceremony at Palmdale in March. The 1st B-2 is named *Spirit of Missouri* and the second B-2 is named *Spirit of California*. The second B-2 was accepted by the 509th Bomb Wing at Whiteman AFB (MO) in April. Monitor Whiteman AFB on 255.6 TWR and 344.6 Weather. Monitor Palmdale (Edwards AFB) 269.2 290.3 App; 375.2 Weather; 236.6 318.1 TWR and 269.9 ATIS.

ITT Sheraton will begin construction in July on a \$750M 3,500 room Desert Kingdom with opening in 1997 in Las Vegas. The Desert Kingdom will charge \$140 a night per room and will be targeting upscale families who budget \$300 a day on vacation. The Desert Kingdom will be built on a 34 acre site adjacent to the Sheraton Desert Inn and Casino. Guests will walk across a torch-lit bridge and enter the Kingdom through two ten-story high carved doors and a massive stone archway. Or you can board a boat for a nine minute ride on the *River of Gold*, passing through an interactive King Solomon's Mines before docking at the resort. The Desert Inn is currently on 464.625 for security, 464.925 for catering, and three 800 MHz freqs: 857.7875 857.8375 and 858.7875. The 858.7875 appears to be used for engineering and maintenance.

AVIATION COLUMN by Marilyn Mayer Base 327 Aviation Editor

Aeroflot International Airlines, which for the past three years has provided twice-weekly flights between San Francisco and Moscow using IL-62 aircraft, has recently changed their equipment on the route to wide-body IL-96's. Differences between the two aircraft types are substantial. While the IL-62 is a narrow-body aircraft with four tail-mounted engines (two on either side) reminiscent of the VC-10, DC-9, and MD-80 designs, the IL-96 is a wide-body type with four underwing engines in the tradition of the Boeing 707/720 series as well as the four-engine Airbus series.

Although the 1988 edition of David Donald's "Pocket Guide to Airline Markings and Commercial Aircraft" does not list the IL-96 (as it didn't exist yet), it does include diagrams and specs on the IL-86, apparently the 96's immediate predecessor. With a wing span of 157 feet, length of 195 feet, and the four powerplants being Kuznetsov KK-86 turbofans generating 28,660 pounds of thrust apiece, the IL-86 was classed as a medium-range transport with a maximum range of 2,237 miles with

a full payload of 350 passengers. Conversely, the IL-96 is a long-range transport capable of carrying 235 passengers nonstop from Moscow-SFO or SFO-Moscow, so along with an increase in overall dimensions from the IL-86 design (especially cabin width) there has also been a hefty increase in powerplant output. (NOTE: If any BASE club members have current specs on the IL-96 I'd appreciate your sending them to me so I can publish them in a future issue of the newsletter.)

The first week in June, Aeroflot added another route - Los Angeles to Moscow via Seattle - and next year plans to add Portland, Dallas, Houston and Bangor to their roster of U.S. cities. Besides San Francisco, Aeroflot currently has Moscow service from New York, Chicago, Miami, Washington, Orlando, and Anchorage. Summer round-trip fares on the SFO-Moscow route start at \$1,000 for economy class to \$1400 for business class and \$1800 in first class. For information on flight schedules and reservations you can call Aeroflot's San Francisco office at 434-2300 or their nationwide toll-free number, 800-995-5555.

MILITARY MONITORING by Mike Heightchew BASE 144

No column submitted this issue!

SHORT WAVE LISTENING by Richard Tidd BASE 446 SWL Editor

BELOW 30MHZ - SHORT WAVE LISTENING

I have to report that I do not have much for you this time as I have been working some long hard hours the past couple of months, which has decreased my listening time. I can report however, that I am the proud owner of a new Drake R8 receiver. The more I use it the more I like it. I have the military freqs, some shortwave stations programmed into it. This radio is quite good. It will pull signals from out of nowhere. I will let you know more next time.

FEDERAL FORUM by Doug Runyon BASE 616 Federal Editor

The law enforcement agencies within our federal government rely on many small bits of intelligence pieced together to create an overall view of a criminal organization. As monitors we can employ many of the same strategies to learn more about the communication systems of the agencies we monitor.

There are a number of things that can be done to help give you a better overall understanding of an agency's system, such as:

- Maintain a detailed log of intercepts to include:
 - Date and time of reception
 - Frequency
 - Signal strength indicating simplex or repeater operation
 - Channel designator given
 - Background noise indicating air units
 - Unit ID's
 - Any miscellaneous information (telephone numbers, names, locations, etc.)
- Spectrum Analysis
- Tone Decoding

I know of a federal monitor that has compiled an extensive computerized database from the FBI communications in his area. Given a unit ID, he can touch a few buttons on his computer and quite possibly tell you the name of the agent, his/her home telephone number, pager number, and cellular number. In some cases he has even compiled the names of the agent's spouse and any children he or she might have. His database often times can provide the last known section within the field office that the agent was known to have been assigned. This might seem a bit strange, but

a lot of information is "leaked" via radio communications. Over time, you can put the pieces together to create a very detailed overview.

The use of a spectrum analyzer is another excellent method of gathering signal intelligence. You can set up the analyzer to display a portion of the spectrum and watch for signals to "pop up". Once you see the "spike" you can then fine tune and verify the exact frequency and even listen to the audio being broadcast. Using an analyzer makes it very easy to spot repeater input frequencies as they will appear, usually with less strength, at the same time that the stronger output signal appears. This method will also show frequencies where radio traffic is being simulcast.

Another related source for system information is listening when the radio technicians are testing or performing maintenance on the system. They often refer to specific frequencies, channel identifiers, and even repeater locations. From time-to-time you can even hear them testing new products.

Finally, the tone decoder can provide you with some fairly accurate verification of whom you are listening to. Federal agencies are notorious for using the same CTCSS tone for all of their radio communications. For example, if you monitor a transmission in a known federal band that is using a tone of 156.7 Hz, you are fairly safe in assuming that what you are listening to is DEA. Only when the federal agencies are operating out of the appointed federal bands is this method not very accurate.

Speaking of DEA, the Drug Enforcement Administration, I have included a frequency list for the Bay Area. Most all of the frequencies I have personally verified. I have been hearing a lot of radio traffic that indicates the existence of many multi-agency task forces. Recently, I monitored related communications on DEA UHF frequencies, State Department of Justice VHF-hi frequencies, and Oakland Police 800 trunked frequencies. It sounded as though various agents were carrying multiple radios. Specifically, I heard DEA agents reference switching to the Oakland radio.

Another growing trend for multi-agency operations is to communicate via an 800 MHz trunked system. I have also heard reports of the 800 MHz nationwide mutual aid simplex frequencies being used. Monitors will have to work a little harder to listen to these systems, but it can be done.

DRUG ENFORCEMENT ADMINISTRATION San Francisco Division - KLR788

Chan	Location/Use	Input	Output	Tone
A1	Mt. Vaca/Santa Cruz Repeater	416.050	418.625	156.7
A2	Mt. Loma Prieta Repeater	416.325	418.900	156.7
A3	Car-to-car	simplex	418.750	156.7
A4	Car-to-car	simplex	418.675	156.7
A5	Mt. San Bruno Repeater	415.600	418.825	156.7
A6	Mt. Diablo Repeater	416.200	418.950	156.7
A7	Mt. Tamalpais Repeater	417.025	418.975	156.7
A8	Car-to-car	simplex	418.175	156.7

The following list is reported to contain frequencies used for special cases. I have personally monitored these frequencies for some time and found radio traffic of other agencies using CTCSS tone 123.0, but not DEA. It would appear as though some of the frequencies are in use by IRS-Criminal Investigation Division (CID) agents.

B1	413.975	419.225	156.7
B2	411.125	419.250	156.7
B3	414.600	419.200	156.7
B4	414.525	419.300	156.7
B5	411.125	418.225	156.7
B6	416.325	418.775	156.7

A few other things to keep in mind when monitoring DEA:

- Lots of air-to-ground surveillance traffic on channels A3 & A4.
- Cellular telephones are in wide use among agents.
- Check the frequencies of the State Department of Justice (Bureau of Narcotics Enforcement), as well as the investigator's frequencies of your local department for related communications.

- Many federal surveillance devices operate in the 216-220 MHz range.

- Air units primarily use "Flint" as their identifier.

The frequencies provided have come from various frequency lists obtained from fellow monitors, Computer Bulletin Boards, and countless hours of personal monitoring. As always, I welcome your comments and contributions. You may contact me through the BASE Club address, BBS, or on Compuserve @ 71344,273

RAILROAD FORUM by Matt Willett BASE 521 RR Editor

The Trona Railway has a new frequency of 161.085. The old frequency of 161.190 conflicted with the Santa Fe's San Bernardino Sub.

With the Army moving out, the Port of Oakland will add 6 (count 'em s-i-x) new intermodal terminals. The Southern Pacific and Union Pacific will provide initial service with Santa Fe to join later. Obviously it is a ways away, but it'll be C-O-O-L to see Santa Fe doublestacks in Oakland!

The California Northern's switching channel of 160.635 has finally become active. Until now all switching activity occurred on the road channel, 161.385.

A new dispatcher link is now active on Espee's Tehachapi line. 160.815 is used between Cameron (M.P. 370.4) and Monolith (M.P. 365.0)

The Espee is planning to retire 8 sidings between Roseville and Portland. The eight are: Vina, Mile Post 203.0, 8200 Ft.; Mead, MP 281.2, 5095 Ft.; Small, MP 325.1, 5579 Ft.; Bray, MP 381.9, 4754 Ft.; Umli, MP 524.0, 6139 Ft.; Frazier, MP 551.3, 5455 Ft.; Natron, MP 615.1, 5260 Ft.; and Renard, MP 714.7, 7373 Ft.. Southern Pacific figures to reduce maintenance costs by retiring the sidings. We'll see.

The Golden Gate Railroad Museum will again sponsor the 'Garlic Train' to Gilroy on 7/30-31. SP 2472 will lead the way. Tix, \$38.

A new shoo-fly is being prepared in the area of 5th avenue, Redwood City. This is a continuation of the grade separation of railroad vs. auto traffic along the Caltrain line. No word on when the cut over will take place.

The Pacific Limited group that is overseeing the passenger portions of the Union Pacific excursions this year, used rented radios for the recent Salt Lake / Golden Spike trains. The frequency used was 461.4375. They may use the same radios / freqs when the U.P. 'E's visit the Bay Area at the end of June.

Amtrak engine #833 has been making the Nor. Cal. rounds lately. This is the new Amtrak designed locomotive built by General Electric, (official designation - AMD103), that has been dubbed 'Mudsucker' by local railfans. The train crews have other names for it, mostly unprintable.

The Southern Pacific Special Agents (Railroad Police) have a new Central Dispatching phone number. It is (800) 892-1283. This is the Espees version of '911'. Use it to report any crimes, track obstructions, trespassing, or vandalism that occurs along the S.P. tracks.

BART's expansion to Pleasanton and Livermore continues to make progress with two miles of track now completed near the summit of I-580.

The Northern Nevada Railroad Company, new operators of the former Nevada Northern, expect to begin revenue service on July 1. The new railroad will move mine tailings from the copper mines at McGill to Shafter, Nv. where the Union Pacific will deliver them to a processing plant in Utah. The new railroad has been assigned 161.370 MHz as its Road Channel.

Proving that the 'Wild West' is alive and well, two passenger trains were boarded and passengers robbed in northern Mexico in late March. Both hold-ups occurred between Chihuahua and Los Mochis on the Chihuahua Pacifico Railroad. This is a popular line with American tourists, so if your heading that way, consider yourself warned.

With the 'Information Superhighway' rapidly approaching, people are trying to fill all of those now empty 500 channels. One new service being planned is 'The Trains TV Network'. George Llamas of Buena Park, California is the 'brain' behind this one. Says George, "We expect to carry a lot of

Railfan events live."

The Santa Fe is expecting a 60% increase in traffic to and from California over the next 10 years. In anticipating this increase, the railroad will lengthen and connect the current sidings to form a double track main from Kansas to New Mexico.

The Emeryville Amtrak station is still not ready for Amtrak's long distance trains. Originally slated to open on May 1st, Emeryville may not open until mid-June. The station currently serves the Capitol and San Joaquin trains and will be a tremendous improvement over the current Oakland stop.

I received a nice note from our intrepid BASE member & die-hard aviation monitor in Indianapolis, Jean Baker BASE 637. There was a publication error in her submission in the March/April issue of *The Listening Post*.

CORRECTED PART OF THE MWARAS that had slipped margins by Jean Baker BASE 637
AFI: AFRICA / SAT: SOUTH ATLANTIC / MID: MID EAST

AFI&	AFI-2	AFI-3&	AFI-4
SAT-1		MID-2	
3452	3419	3467	2878
6535	5652	5658	5493
8861	8894	10018	8903
13357	13273	11300	13294
17955	17961	13288	17961
		17961	

NCA: NORTH CENTRAL ASIA **INO: INDIAN OCEAN**

NCA-1	NCA-2	NCA-3	INO-1
3019	2851	3004	3478
5646	4678	5664	5634
13315	6592	10039	8879
17958	10096	13303	13306
	17958	17958	17961

Oh, before I forget - thought you might get a chuckle out of some airline ditties I wrote:

"We'll be in the blocks at 1904
 There's a big sticky mess on the aft galley floor
 We're 30 minutes late and the passengers are nervous
 And all of the lavs are out of service"

(Can't you just imagine the Captain of an oceanic flight getting stuck with the following)

"ARINC, we need a quick phone patch
 With our company in Dallas-Fort Worth
 We're 3 hours from landing,
 And it's my understanding
 We've a passenger who's about to give birth!"
 "To handle your problem" says dispatch
 "There's nothing in company regs.
 Keep your fingers tightly crossed
 That no flying time's lost
 And have your passenger do the same with her legs!"
 "I took a trip to San Jose
 When I arrived, there was hell to pay
 Brand-new luggage given to me by Santa
 Ended up being sent to Atlanta!"

New GPS Unit - Garmin GPS 45 Review

I just purchased the new Garmin GPS45 unit and boy is it neat!! It is very small (about the size of 8 AA batteries) and has a nice graphic interface/display. This unit will track up to 8 satellites simultaneously and provide your location to within 49 feet, as well as your altitude. The unit will track up to 250 way-points that you can enter manually, or have the unit memorize while "you are there". These can also be organized into "Tracks" (a specific series of way- points) usually used for trips. The unit will also show you the direction and distance from any two points, with a graphic plot of your path as you travel between them. In addition, an RS232 serial port is supplied (standard) so you may connect it to devices using this option (such as Laptop mapping programs, APRS, etc.). The unit uses 4 AA alkaline batteries which will provide up to 20 hours of use. I've purchased some of the new RENEWAL (Ray-O-Vac) alkalines that should work nicely in this application. These units are VERY DIFFICULT TO FIND DISCOUNTED. The only place to get them is WEST MARINE, on San Antonio Ave., near 101, in Mt. View.

Yaesu Ft-11r/41r - New Yaesu Mini-xcvrs Are a Big Hit

I just purchased the new Yaesu FT-11R (VHF) and FT-41R (UHF) HT's. These are really great radios. They have several very unique features: First, they are REALLY SMALL - Only the Standard C-108A is smaller (but no TouchTone pad). Next, they are very broad-band. The VHF radio covers 100-174+ MHz. It also switches to AM decode when the freq drops below 136 MHz. This is perfect for monitoring Aircraft. Another feature is your choice of either 150 memories (for freqs), or 75 "pairs", one of the pairs has frequency info, the other is a six-character alpha display so you can enter call ID, location, etc. Yet another great feature is the nifty mobile mount. When you clip the radio (either one) into the mount, the output jumps to 5 watts, there is an automatic cooling fan to keep the radio cool, and it will slow-charge the nicad battery pack at 70 ma/h. CTCSS is included for transmit, and an optional board is available for Tone Squelch (\$56.00). This unit is TOUGH!!! Very solidly made. Lots more to say, but am running out of lines here. See me for details (or BASE 446, he has one too) at a Club meeting, or drop me e-mail for more details. Cheers...

Editor's Note on GPS - It appears that there are six discrete VHF aviation frequencies that can disrupt the reception of GPS signals (GPS is now being certified for precision IFR approaches) when the aircraft radio is keyed. These freqs are 121.15, 121.17, 121.2, 131.25, 131.27 & 131.30. It appears that these frequencies match the 1/12 & 1/13 harmonic of the GPS receive freq of 1.575 GHz. The FAA is now mandating that GPS certification must include the ability to transmit on all of those six freqs previously mentioned by holding down the microphone button for twenty seconds and the GPS must be able to handle this overload without dropping off. Garmin, at a recent meeting of the FAA and other GPS manufacturers suggested that the six freqs be used for ground-air (uplink) reception only.

BELT CLIP AND AUTO HOLDER FOR HANDHELD SCANNER/HT by Richard Tidd (BASE446)

Michael Gruhn (BASE172) turned me on to a couple items that I thought were great and think you should know about. (1) If you have ever had the problem of having your handheld scanner or HT fall off your belt or just thought the radio was great but how in the world could they supply such a cheap belt clip with it? Well, check out the ICOM belt clip part #MB-22. It is an all-steel alligator clip that really attaches to your belt. At about \$10 from HRO (Ham Radio Outlet) it is worth it to keep your radio at your side and not have to worry about someone lifting it off your belt. (2) Do you use handheld scanners or HT's in your car, truck or van and only have them fly across the vehicle as you make that sharp turn or have them slide to the floor upon that quick stop to catch the action on your radio? Well, there's no need to fear, Radio Shack is here!!! They have a neat holder that really works. You won't find it in the scanner section, CB section or even the Short Wave radio section. You will find it in the Cellular Phone section. It is a universal grip mount catalog #17-510 for \$49.95. It consists of a mounting plate, goose neck, and head assemble that squeezes the HT in place. Your HT is quickly

released by pressing the red release button. I have two in my van and like them. While not cheap, they keep my radios in place. You may have to special order these as not all Radio Shacks carry them. I had to go to 4 stores to get my two. JC Whitney has something similar with parts you can buy separately. Thanks to BASE172 for the tips.

CLUB HANDOUTS by Tim Main Base 391 Handout Manager

No column submitted this issue!

Radio Shack PRO-51 Test Modes © Howard Bornstein June 2, 1994.

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There is an interesting test mode in the PRO-51 that, combined with the direct search feature of the scanner, lets you pick up out-of-band frequencies. You will have full access to the 66-88 MHz ranges as well as the cellular base range of 869-896 MHz.

Actually, there are several test modes in the PRO-51 (most of these comments should be true for any Uniden-made Radio Shack scanner, such as the PRO-46). I'll describe them first and then how to take advantage of one of them to get the restricted frequencies.

There are three data test modes. These modes completely destroy any frequencies you had programmed into your scanner, so it's best to use these techniques before you program your scanner. If you have already programmed it, you'll have to decide if these new capabilities are worth reprogramming.

TEST MODE 0. Clear the scanner.

A well-known method of clearing the scanner to all zeros is to hold down the 2 key, the 9 key, and turn on the scanner. All frequencies will be lost.

TEST MODE 1. Fill channels 1-25 with test frequencies.

Press the 2 key, the 9 key, the L/Out key, and turn on the scanner. This fills channels 1-25 with these frequencies:

1	30.050	2	40.840	3	49.900	4	138.150
5	162.400	6	173.225	7	406.875	8	453.250
9	511.9125	10	108.500	11	118.800	12	127.175
13	135.500	14	66.450*	15	76.825*	16	87.425*
17	157.800	18	482.3625	19	29.000	20	54.000
21	806.000	22	857.200	23	888.96*	24	911.500
25	954.9125						

* indicates not within the PRO-51's normal coverage. More on how to use these in a minute.

TEST MODE 2. Fill channels 1-17 with test frequencies.

Press 2, 9, Manual.

Fills channels 1-17 with these frequencies:

30.00, 40.00, 50.00, 140.00, 155.00, 170.00, 410.00, 460.00, 510.00, 54.00, 109.00, 118.00, 127.00, 135.00, 810.00, 860.00, 950.00.

There is also a display diagnostic mode.

TEST MODE 3. Display Test.

Press 2, 9, BAND or 2, 9, MONI. This puts the display in test mode. Every annunciator and every digit element is turned on in a scan from the left side of the display to the right. To keep this test mode continuous, release the buttons before the first scan finishes. This mode does not affect stored memory. Press any key to exit this display mode.

How to use the test mode frequencies

Now, if you've decided to try test mode 1, you will find several out-of-band frequencies stored in your memory channels. Channels 14-16 hold frequencies in the blocked-out 66-88 MHz range, and channel 23 holds a frequency in the blocked-out cellular base range. Once you have these frequencies stored in a memory channel, the PRO-51's direct search feature will let you search through these ranges. In the cellular band, the scanner searches in the correct 30 KHz steps.

You don't have to keep these frequencies in the channels they were stored by the test mode. You can move them to any channel in the scanner. Here's how.

First move the frequency to a monitor channel:

While on a channel with one of these frequencies, open squelch completely. Press direct search button, either up or down. The direct search button puts the scanner into search mode and the open squelch holds the frequency. Then press the Monitor button. The frequency is now in the monitor channel indicated in the display.

Now you can move it to any regular memory channel in the scanner:

Enter the channel number Press PROG Press MONI Press the number of the monitor channel if the proper channel is not displayed Press E(nder)

The frequency is now permanently stored in the memory channel. You can do a direct search from this memory channel at any time.

The 66-88 MHz range mainly covers TV audio. However, there is a strange phenomenon concerning TV audio and the PRO-51. Channels 4, 5, and 6 fall within the 66-88 MHz range (71.75 MHz, 81.75 MHz, and 87.75 MHz respectively), yet the PRO-51 will not pick up the audio frequency while searching in this range. However, TV channel 2 audio is at 59.75 MHz. When you add the intermediate frequency of 21.6 MHz, you get an image of the TV channel 2 audio appearing at 81.35 MHz. This does come in, although raspy, since the PRO-51 is receiving in narrow FM mode while TV audio requires wide-band FM mode for proper reception.

I'd be interested if anyone can verify that any of these test modes work on the PRO-46 or any other Uniden-made Radio Shack scanner.

Howard Bornstein CompuServe 76174.637 or Internet: 76174.637@compuserve.com

DISASTER PREPAREDNESS by Bob Gillmore Base 582 Disaster Officer

No column submitted this issue!

PLANE SPOTTING EXCHANGE by Marilyn Mayer BASE 327 Aviation Editor

The question I'm most often asked by folks who want to get into the plane-spotting hobby is, "What sort of equipment do I need, and how much will I have to spend on it?" My stock answer to the first part of the question is that the equipment you'll need depends on exactly what you want to do on your plane-spotting outings at the airport. If you want to take pictures of planes you'll need a camera with certain specific capabilities; if you want to listen in on radio comms you'll need a handheld VHF scanner that includes the 118-136 MHz commercial aircraft band; and if you want to get nice close-up views of planes without snuggling right up next to them physically (always desirable, but rarely possible), you'll need a good pair of binoculars.

The second part of the question is a bit more difficult to answer. We all know veteran spotters who use only the naked eye for aircraft identification and tracking and whose total investment in equipment adds up to 95 cents for a notebook and 50 cents for a ballpoint pen. Generally, though, most spotters get around to investing in at least a scanner and a pair of binoculars, adding on fancier gear like cameras, tripods, and camcorders later as they get deeper into the hobby. Fortunately, you don't have to pay top dollar for most of this equipment - in fact, you can get excellent gear at bargain prices if you (1) know where to look and (2) know what you want.

For this month's column, let's talk about binoculars.

Binoculars come in varying magnifications and lengths. Let's take a set of 7x50's as an example. The 7 refers to magnification power, i.e., a subject 700 feet away seen with 7X magnification appears as it would from 100 feet with the naked eye. The 50 refers to width of field of view expressed in degrees. Obviously, the bigger the numbers the bigger the image.

In standard-class binoculars, 7x50 to 10x50 are about the optimal size for most uses and very well suited to plane-spotting. Some manufacturers like Minolta and Nikon make much bigger

magnification binoculars, some even with zooms, like the 7x15x35 zoom and the x-21x50 zoom, but they're (1) very pricey and (2) quite heavy and hard to hold still in strong winds. These are terrific binoculars if you want to spend \$500 and up for them new along with about \$100 for a tripod, but you can buy most sizes of binoculars (pre-owned) for much less at sources like swap meets, Army/Navy surplus stores and pawnshops. I bought my set of 10x50 Zeiss binoculars at a pawnshop three years ago for \$45 and they've worked just as well as the same pair Discount Camera in San Francisco was selling for \$250.

If you go shopping for used binoculars, be sure to check them for both focus and fit. The middle focusing ring as well as the eyepiece focus rings should work smoothly without any roughness or noise. (These can be signs of rust inside the mechanism - something you definitely don't want to deal with.) The binoculars should feel comfortable; remember, you're going to be using them a lot in the field, so if they're too heavy or if the eyepieces are spaced too narrowly or too widely, select another pair.

In future columns we'll talk more about equipment as well as plane-spotting techniques. In the meantime I'd like to hear from more of you about your own techniques, equipment, and plane-spotting experiences. (Remember, this is YOUR column, not mine.) Until next time, 73's and good hunting.

The California Highway Patrol is seeking individuals to apply for the position of Highway Patrol Officer. Salary is \$2800-\$3722 per month. Women and bilingual men are encouraged to apply. Age restriction is 20-31. Application deadline is July 13, 1994. Stop by a local CHP office or call (707) 648-4195

The Boeing 777 has had it's first test flight. Here is your chance to get the detailed plastic model, just like what you see in the travel agencies and the airline offices. The model will be available in August. Simple assembly is required. Order Item #1509 (18.99) plus \$4.85 S&H from:

The Boeing Collection/BD&A
12004 115th Ave. NE
Kirkland WA 98034

or you can call (800) 671-6111 and order with Visa or MC. You can also get the latest Boeing catalog from:

Boeing Employee Services
PO Box 3707
MS 6E-RC
Seattle WA 98124-2207

Have you seen the latest in Flight Simulation programs for the PC. Microsoft has just released *Space Simulator* where one can go to the edge of the Galaxy.... and beyond. According to the release that I've seen:

- Zoom through the Milky Way based on data from NASA
- Choose a variety of spacecraft to command including the Shuttle & a Lunar Lander
- Space walk in the Manned Maneuvering Unit
- Use the observatory to view any location up to 100,000 years, past or future
- Practice your astronaut skills with landings on the Moon or Mars

90 day money-back guarantee from Microsoft. MSRP is \$54.95

Bill Halpin BASE 710 sent in a great list of **Inland Empire Area Fire Freqs.** Way too many to put into this issue so we'll spread them out over next couple of issues.

Frequency	Agency	Usage
33.640 R	Forest Hills Fire	Rebroadcast 800 MHz
	Green Valley Lake Fire	

	Lake Arrowhead Fire	
140.025	Twentynine Palms USMC EAF Fire	Dispatch
140.100	Twentynine Palms USMC EAF Fire	
141.050	Fort Irwin Fire	Dispatch
142.325	Fort Irwin Fire	
150.345	March AFB Fire	Dispatch/primary
150.575	Fort Irwin Fire	
151.160	CDF Region 3	TAC
151.175	CDF Riverside County	Dispatch/secondary
	Riverside County Fire	"
151.220	CDF	Air to Ground
151.250	CDF San Bernardino County	TAC
151.265 R	CDF	"
	US Forest Service	CDF Mutual Aid
151.280	CDF Riverside County	Air TAC
151.310	CDF Region 3	Air TAC
151.325	Adelanto Fire	County Mutual Aid
	Apple Valley Fire Protection District	"
	Baker Fire	Dispatch/primary
	CDF San Bernardino County	"
	Daggett Fire	"
	Hinkley Fire	"
	Joshua Tree Fire	"
	Needles Fire	"
	San Bernardino County Fire	"
	Twentynine Palms Fire	"
	Twentynine Palms USMC EAF Fire	County Mutual Aid
	Victorville Fire	"
	Wrightwood Fire District	"
151.340 R	CDF Region 3	Admin
151.355 R	CDF	Special Disp & TAC
	US Forest Service	CDF Mutual Aid
151.385 R	CDF Riverside County	Dispatch/primary
	Riverside County Fire	"
151.400	CDF Riverside County	TAC
	Riverside County Fire	TAC
151.445 R	Arrowbear Lake Fire	Dispatch/primary
	CDF San Bernardino Cty	"
	Crest Forest Fire Protection Dist.	"
	Mount Baldy Fire	"
	Redlands Fire	"
	Running Springs Fire	"
	San Bernardino City fire	Count Mutual aid
	San Bernardino County Fire	Dispatch/primary
	USFS San Bernardino National Forest	CDF Mutual Aid
152.945	Kerr-McGee Chemical Co. Fire Dept	Dispatch/primary
153.755 R	OES	Phone Patch
153.770	CDF Riverside County	Response/support
	Palm Springs Fire	County Mutual Aid
	Riverside County Fire	Response/support
	Victorville Fire	

153.830	San Bernardino City Fire	Chiefs Net
	Victorville Fire	TAC
154.010	Banning Fire	Dispatch/primary
	CDF Riverside County	Banning Mutual Aid
	Riverside County Fire	"
	Victorville Fire	Admin.
154.025	Chino Valley Fire	Dispatch
	Montclair Fire	"
	Ontario Fire	"
	Rancho Cucamonga Fire District	"
	Upland Fire	"
154.070	Adelanto Fire	Dispatch/primary
	Barstow Fire Protection District	"
	Big Bear Lake Fire	Desert Mutual Aid
	Newberry Springs Fire	Dispatch/primary
	Searles Valley Fire	"
	Yermo Fire	"
	Yucca Valley Fire	"
154.130	CDF Riverside County	Response/support
	Coachella Fire	Dispatch/primary
	Riverside County Fire	Response/support

Super list Bill, I'll pass the rest of your list on to the new Editor.

Bob Burdick (BASE 635) lives in Meriden CT and sent us a long letter with frequencies and pictures. Bob is working with Jean Baker in setting up the tours for the 1994 Monitoring Times Convention in Atlanta. Jean has set up a tour of Atlanta Center, the Thursday (Oct 20) before the convention begins. This tour is scheduled to begin at 1500 and meets in front of the Airport Hilton Hotel. Bob is the coordinator of the Delta Maintenance Facility Tour on Friday (Oct 21) in the morning and will also be hosting a tour of "Atlanta Radio" (Delta Ops) on Friday afternoon. The tours are being scheduled to not compete with main convention activities. Like many of us in the hobby, Bob is a die-hard aviation buff. He sent along quite a few pictures from last year's activities at Delta during the MT Convention. These pictures are of the DL maintenance facility and show work being performed on a 727, 767, and restoration on a DC-3. (Editor's note: these pictures will be on display at the next two Club meetings). Bob is a staunch supporter of the BASE Club and is recruiting members in the Hartford area. He says when you are in the Hartford area, be sure to take some time out and see the New England Air Museum located at BDL, the largest air museum in the Northeast. He says that a scanner broadcasts BDL comms over the museum floor and is also used in place of Muzak® when calling, and placed on hold at the museum. Bob sent along some freqs to monitor while at BDL.

Bradley International - BDL

118.150	ATIS	122.950	Unicom	123.950	App/Dep
120.300	Tower (351.8)	125.350	App	121.050	Dep
125.650	App	121.750	Clnc (322.3)	125.800	App (323.2)
121.900	Gnd (348.6)	127.800	App	122.100	FSS
103 TFG CT-ANG A-10 "MAKO" (formerly Shark) at BDL					
34.15	Chan 1	34.75	Chan 2	40.65	Chan 3
46.65	Chan 4	49.75	Chan 5	49.85	Chan 6
294.000	Command post	349.700	Ops		

CEF - Westover AFB (AFRES)/Metropolitan Airport 439 MAW C5A, Springfield Mass

BDL handles App/Dep

134.850	Tower	118.350	Ground (275.8)	252.100	CP "Casino Royale"
342.500	Meteo	372.200	Dispatcher		

Great report Bob! Please check in often.

Cliff Polkinghorn, BASE Club member & RCMA Editor has moved from the Bay Area to far Northern California, in the Weed area. (Cliff, is this what is called out in the weeds?) You may know Cliff as Glenn's right-hand man when he worked at Scanners Unlimited in San Carlos. Cliff sent in a super list of freqs for Northern California via Rod (BASE 12).

155.310	Siskiyou Cty Sheriff 1	155.070	Siskiyou Sheriff 2	154.920	Clemars
155.475	NALEMARS	155.010	Weed PD	155.010	Mt Shasta PD
155.415	Yreka PD	42.40	CHP Base	42.16	CHP Mobile
42.34	CHP Base	42.18	CHP Mobile	47.02	CalTrans
151.415	Fish & Game	154.340	North County Fire	154.430	Yreka Fire
154.280	White 1	154.265	White 2	154.295	White 3
164.175	USFS	155.790	County Jail	155.085	Lake Shastina
151.325	CDF Siskiyou Cty	151.160	CDF Shasta Cty	155.175	Ambulance
151.355	CDF State 1	151.265	CDF State 2	151.280	CDF Air Net
154.040	South Cty Fire				

Heading off to Maryland for vacation? Dr. Tad Dadisman Jr. (BASE 644) sent us a spectacular list of freqs for the **Columbia, Baltimore, Howard County** area which he monitors. He, like many of us that have to juggle careers and family, wishes for more monitoring and "searching" time.

(HO CO = Howard County)

159.090	HO CO PD F1 Disp.	155.595	HO CO PD F2 TAC	155.370	HO CO TAC
155.475	HO CO F4 NLEEF	155.115	HO CO F5	154.845	HO CO PD
154.650	HO CO PD	151.115	HO CO Hwys	155.925	Sheriff
155.820	HO CO Utilities, Parks	158.895	HO CO Legal	37.260	HO CO Legal
156.015	HO CO Legal	460.050	Mutual Aid Baltimore		
453.550	Mutual Aid, Wash DC	165.5125	WHACA Mobile	166.4625	ATF Common
418.625	DEA	165.7875	USSS-Baker	165.3750	USSS-Charlie
165.2125	USSS-Mike	164.650	USSS-Tango	407.850	Air Force 1
415.700	Air Force 1	154.250	HO CO FD F1 Disp.		
154.220	HO CO FD F2 Firegnd	154.175	HO CO FD F3 Firegnd		
154.280	HO CO FD F4 FMARS	155.115	HO CO FD F5 Interagency		
153.770	HO CO FD	154.295	HO CO FD FMARS 1		
154.265	HO CO FD FMARS 2	155.340	HO CO Ambulance-hospital		
155.400	HC General	155.220	PG General, AA General		
155.295	Baltimore Co General	44.740	Maryland State Patrol Helo "Trooper"		
45.020	DSP Helo	47.660	MSP Helo	122.750	Air-Air
122.850	MD-EMS Helo Coord	123.050	Helipad Coord	154.100	BWI Fire
463.075	EMS 4	463.175	EMS 8	462.950	EMS 9
462.975	EMS 10	46.700	HMX Nighthawk Fleet		
46.750	HMX Nighthawk	46.800	" "		
375.000	" "	34.350	HMX VIP Transport		
142.750	HMX Command Post	265.800	HMX Sqdn Common		
119.000	Camp David Heliport	143.100	White House Heliport		
276.400	Marine HMX-1 Control	273.950	Marine Helo HMX Comm 2		
320.400	" " Comm 3	225.600	USAF 1st Helo SQ Control		
292.200	1st Helo Primary	287.600	1st Helo Secondary		
297.500	1st Helo Air-Air	231.300	Pentagon Helipad		
293.500	Pentagon Switchboard	268.00	Pentagon Switchboard		

Superb list, Tad. Please check in often. We'll run the last three pages of his frequency listing in a future issue.

WANTED: Robert Brown (BASE 132) is looking for a good used Yupiteru MVT-7000, MVT-7100 or MVT-8000 but prefers a MVT-8000. He would like to do monthly installments (in cash) \$95-100 at the monthly meetings. If you are interested in this proposition, contact Robert at (408) 251-5378 after 10:00 PDT.

REVIEW  **THE RADIO SHACK PRO-51 HANDHELD SCANNER** by © Howard Bornstein
1994 Design EQ [This document may be freely distributed for non-commercial use as long as it is not modified.]

Overview

The PRO-51 is a new handheld scanning receiver, designed by Uniden, for Radio Shack. It's a high-end Radio Shack scanner, but doesn't seem to have a clear place in the current Radio Shack handheld product line. By features and price, the PRO-51 seems to be a replacement for the PRO-39, but it appears to be a new design center, at least according to style, and may be the first in a new generation of handheld scanners from Radio Shack.

The specs for the PRO-51 fall somewhere in between the PRO-39 and the PRO-43. This new scanner has 200 channels arranged as 10 banks of 20 channels, 10 monitor channels, and one user-programmable search bank. However, it also comes with four pre-programmed search banks covering fire, air, marine, and weather. Some scanner design changes, as well as its quite acceptable performance characteristics, make the PRO-51 an impressive scanner for its price range.

The PRO-51 receives these frequency ranges:

29.0000 - 54.0000	MHz
108.0000 - 174.0000	MHz
406.0000 - 512.0000	MHz
806.0000 - 823.9375	MHz
851.0000 - 868.9375	MHz
896.1125 - 956.0000	MHz

The Case

The PRO-51 is housed in a plastic case with a new look from the PRO-39, PRO-43, PRO-44 case designs. The top of the PRO-51 is wider than the bottom, giving it a look reminiscent of some of the amateur HTs. The plastic case is consumer-quality, as is the plastic belt clip. While adequate for most consumer uses, the case won't withstand rough handling.

Display

The display on the PRO-51 is larger than the PRO-43 and the numbers are also larger. It displays the standard scanner information: channel number, frequency, and enabled banks. It also has annunciators for the mode (search, scan, monitor, manual), delay, and channel lockout.

Unfortunately, one of the real drawbacks of the PRO-51 is its very low-contrast LCD. Unless you are in direct sunlight or looking straight at the display, reading the display can be quite hard.

Light

The display is lit by two small bulbs, one on either side of the display. The two bulbs helps make the lighting more uniform and cover the display evenly, but the bulbs are still fairly dim. You will be able to see the display in the dark, but it won't be bright.

The light remains on for 15 seconds after the last press of any key. This means you don't have to worry about pressing the light button to keep the light own while you are also trying to enter frequencies. Although Radio Shack still doesn't allow you to permanently turn the light on, this longer, hands-free light is a great improvement over the momentary-on light switch found on the PRO-43.

Sound

The PRO-51 has reasonably good sound quality with a moderate audio amplifier. Its 250 mw amp delivers clean, distortion-free sound through virtually it's full range. However, even at highest volume, you will have trouble hearing this scanner in extremely noisy environments.

The sound tends to be bright. There is also a perceptible, but not terrible squelch tail at the end

of transmissions.

Scan and Search Banks

The PRO-51 has a memory capacity of 200 scan channels arranged in 10 banks of 20 channels each. During a scan, you can enable or disable an entire bank by simply pressing a number from 0 to 9 on the keyboard. When a bank is enabled, its number appears in a small annunciator at the top of the LCD display. Only enabled bank number appear at the top of the display. Disabled banks don't appear. This subtle feature cuts down on display clutter.

The PRO-51 gives you one user-programmable search bank and comes with four pre-programmed search banks.

The programmable search bank works in the same manner as previous Radio Shack scanners. You supply a lower and upper frequency limit. The scanner then searches between the two frequencies at a specific step. The steps are chosen by the scanner, depending on the frequency range. You cannot specify the frequency increment.

Reprising a feature found in the old Bearcat 250 and Bearcat 300, the PRO-51 comes with four pre-programmed search ranges. The ranges are:

Fire Selected frequencies within:

33-37 MHz 45-47 MHz 150-157 MHz 163-170 MHz 453-468 MHz

Air

108 - 136.975 in 12.5 KHz increments.

Marine

All the VHF Marine channels in 25 KHz increments.

Weather

All 7 NOAA national weather frequencies.

The pre-programmed ranges can be very useful for finding activity when you are in a new location, when you don't have a list of frequencies for these services, or when you just want to hear lots of action.

One of the disappointments of the PRO-51 is that there are a large number of frequencies within two of these pre-programmed search ranges (fire and air) that cause the scanner to stop or lock up. Some are pager signals, others are digital control frequencies, still others contain various kinds of noise. There are also several birdies listed in the air band.

Because you cannot lock out frequencies that you find during a search on the PRO-51, these spurious signals make using the built-in search banks much less useful. I found that both the fire and air bands had many obstacles to searching. The marine band seemed to work fine, however, as did the weather band.

My guess is that the severity of this problem will depend quite a bit on where you live. I use the PRO-51 in the San Francisco Bay Area and I suspect you would find similar results in any urban area.

Direct search
You can go into an immediate search mode, starting with any frequency currently in the display by pressing either the up or down arrow. The scanner searches in the specified direction continuously. The design of this feature in the PRO-51 is like that in the PRO-34 and PRO-37. In the PRO-43, the arrow keys are also used to allow you to change the direction of the search, scan, and manual step. However, this means you need an extra keystroke to use the direct search feature in the PRO-43. The PRO-51's simpler design is easier to use, but you lose the versatility of being able to change your scan and manual step direction.

The direct search feature, which is a Radio Shack exclusive for non-VFO-based scanners, is a poor-man's version of multiple search banks. However, in some ways it's more flexible than having multiple search banks because you don't have to set anything up. Sometimes it is very useful to search just above or below a certain frequency. Direct search makes this a snap.

Speed

Radio Shack uses the term *hyperscan* with the PRO-51, but it is unclear what this term really means, except perhaps "relatively fast." The PRO-43, also with hyperscan, scans at 25 channels a second and

searches at 50 frequencies per second. Hyperscan in the PRO-51 has been cranked up quite a bit because it screams along at 50 channels a second in scanning mode and 100 frequencies per second while searching.

The faster speeds of today's new scanners are really starting to be a significant benefit.

If you are scanning or searching a group of very active frequencies, faster speed won't help much because the scanner will be sitting on active frequencies most of the time. However, with a high-speed scanner, you can effectively scan or search quite a large number of relatively-inactive frequencies, because fast speed means that any given frequency will be checked relatively often. This insures that you won't miss a frequency when it becomes active.

Sensitivity

The PRO-51 is quite sensitive across its entire reception range. While I didn't do lab tests, the subjective sensitivity, in side-by-side comparisons with the PRO-43, was that the PRO-51 was within 10-20% of the sensitivity of the PRO-43. This is quite good. Of course, depending on your location and circumstances, your mileage may vary.

Intermod

The PRO-51, like most Uniden-made handheld scanners, is subject to intermod across various bands. Some public service frequencies in the 800 MHz range may get blasted by pagers. Other regions of the spectrum may also pick up spurious noise. Your best bet is to buy the PRO-51 from a place that allows a money-back trial period. You will want to check if your location gives you an intermod problem on the frequencies you generally listen to. If you don't find any significant problems, the PRO-51 will probably work like a champ for you.

The 160 MHz railroad range, which was so plagued by intermod in the PRO-43, is clear on the PRO-51. This makes the PRO-51 a good scanner for railfans.

Images

Images also occur frequently in the PRO-51, due to its double-conversion design. As with intermod, you should check to see if you get any images falling on your most interesting or desirable frequencies.

Radio Frequency Interference Sensitivity

The PRO-51 seems reasonably immune to RFI generated by computer equipment. It had less trouble surviving next to my Macintosh, LaserWriter, disk drives and modem than the PRO-43. Again, your experience may be different depending on your computer equipment.

I've noticed no obvious RFI problems while using the PRO-51 in the car, but this situation will likely vary from car to car.

Delay/Priority

The PRO-51 offers a 2-second delay that you may apply to any individual channel or to the search bank. Without the delay, the scanner switches *immediately* to the next channel or frequency. The PRO-51's high scanning and searching speed, coupled with the option of no delay, make it a good scanner for monitoring trunked systems.

The PRO-51 also has one priority channel that you may assign to any of the 200 channels. The Priority channel is checked every two seconds and the scanner will switch to it if it becomes active, even if the scanner is receiving a transmission on another channel in scan or manual mode. The priority channel will not interrupt a search.

Monitor channels

The PRO-51 continues in the tradition of Radio Shack scanners by having 10 monitor channels. These channels are temporary memories that you use to save interesting frequencies found during a search. You can then monitor them directly or move them into scan bank channels.

Channel Lock out

You may lock out individual channels on the PRO-51 by pressing the L/OUT key. Locked out channels are not scanned. Strangely enough, a channel that has the frequency of 0.0000 is not automatically locked out and you'll need to do this manually, if you clear a channel.

There is no way to lock or unlock a group of channels at once.

Keyboard lock

You may lock out all the keys on the keyboard (except Scan, Manual and Light) by holding down the K/L key for two seconds. The word KEYLOCK appears in the display and all keys except those described above become inactive. The volume and squelch knobs continue to work, even when keyboard lock is on.

Beep

The PRO-51 produces a beep sound each time you press a key as audio feedback for keyboard operations. In addition, the unit starts beeping (along with a display announcement) when it detects a low battery condition. This beep cannot be turned off. The volume of the beep is not tied to the volume control knob but, instead, is fixed. Fortunately, it is not too annoying and it is at a comparable volume when heard with headphones as it is through the speaker.

Power requirements

The PRO-51 uses standard AA batteries. It only requires 4 batteries and takes alkaline, Nicad, or Renewal batteries. Nicads can be charged right in the scanner and there are two power jacks on the scanner—one for charging batteries and the other for powering the scanner without charging.

The PRO-51 gets a good, solid 8-10 hours of operation with 650 mAh Nicad batteries. It also has a 3-day memory backup if the batteries are removed.

Accessories

As is typical with Radio Shack scanners, the PRO-51 comes with a minimum of accessories. You get a belt clip and a rubber duck antenna. That's it. An AC adaptor and earphone are extra. The manual is a standard, clear but sparse Radio Shack manual and will get you operating the PRO-51 in no time.

Modifications

There are no commonly known hardware modifications of the PRO-51 at this time. The understanding is that cellular phone reception is permanently blocked out, although direct reception is possible in some units via a test mode. The PRO-51 also picks up cellular images in the 896-918 MHz range right out of the box. However, these images step in 12.5 KHz steps rather than the proper 30 KHz steps used by cellular phone frequencies, so some of the images may be off frequency.

There is a way to put early PRO-51s into a test mode that plugs test frequencies into the first 24 channels. One of these test frequencies falls in the cellular base range. By using the direct search capability of the PRO-51, you can search the cellular base range and the scanner steps in the proper 30 KHz steps. This test procedure also lets you search between 66 to 88 MHz. I have published a separate document describing these test modes. These frequencies will be removed from later versions of the PRO-51 test modes.

Recommendations

The PRO-51 is a solid, fast, reliable scanner, subject to some amount of intermod and images. If you don't have a specific problem with these in your area, you will find it a champ performer for its price-range. It is also a good choice for railroad fans, as it doesn't pick up much garbage in the railroad frequencies.

If you don't need reception of the military air band or if your budget doesn't allow for a PRO-43, the PRO-51 is a great choice for a mid-range handheld scanner.

Howard Bornstein CompuServe: 76174,637 or Internet: 76174.637@compuserve.com

Our Public Safety Editor, Rod Smith (BASE 12) is a strong and dedicated supporter of the BASE Club. Rod sends us the latest updated listing of freqs in use on Yosemite Park radios.

FY-94 PARKWIDE RADIO PROGRAM MAINTENANCE

Ch	NAME	FREQ TX	TONE	FREQ RX	DATE
01	Park Henness Ridge	172.650	N/A	172.650	
02	Hoffman (Park)	171.650	131.8	172.650	FY-95

03	Crane Flat	172.025	110.9	172.650	FY-94
04	Wawona Point	172.025	123.0	172.650	FY-94
05	Valley Local	166.300	N/A	166.300	FY-94
06	Turtleback	164.425	110.9	166.300	FY-94
07	Sentinel	164.425	123.0	166.300	FY-95
08	Common Use	168.350	110.9	168.350	
09	Air/Ground	170.000	N/A	170.000	
10	Fire Henness Ridge	172.775		172.775	FY-94
11	Fire North Mountain	171.800	110.9	172.775	FY-94
12	Fire Signal Peak	171.800	123.0	172.775	FY-94
13	Fire Mount Hoffman	171.800	131.8	172.775	FY-94
14	Weather (Fresno Area)	None		162.400	***
15	Weather (Bay Area)	None		162.550	***
16	Old Turtleback	172.775		171.800	

*** - Removed from radios in FY-95 and available for other programming

NEW TERMINOLOGY - Terminal Radar Service Area (TRSA) is now known as Class "C" airspace; Terminal Control Area (TCA) is now known as Class "B" airspace.

Brian Humphrey of the L.A. City Fire posted this on Prodigy and graciously allowed us to reprint it here: "In response to your question: The Task Force concept was pioneered by the Los Angeles City Fire Department. A Task Force is a two-company (three piece) assignment. The Task Force consists of an "Engine", Aerial Ladder "Truck", and "Pump". The Pump with its one driver -ALWAYS- accompanies the Truck, which has no water, pump or hoses. Together, the Truck and Pump are known as a "Light Force" and are considered one company. When an Engine responds with the Light Force the -two- companies (three apparatus) are considered a "Task Force". In many situations, an Engine or Light Force will respond separately. When together they are a Task Force. This powerful yet flexible deployment model has been imitated by Fire Departments worldwide.

We have -NEVER- dispatched by radio. What you hear on your scanner is a simulcast of what portion of the Dispatch we want to be broadcast. The actual audio dispatch takes place via microwave and dedicated telephone line, and is often information that we would prefer not to be broadcast. Our Dispatch system is currently undergoing a major modification. We currently use voice and mobile status encoding at all times. When busy we may -not- simulcast all dispatches so that you can "hear" them on a scanner. During the busy July 4th weekend, we will often send printouts to the station only." Brian Humphrey - Los Angeles City Fire Dept.



LATE BREAKING NEWS

Richard (BASE 595) reports "At midnight tonight (6/30) Union City Fire will become part of the Fremont Fire Dept. Union City is contracting with the City of Fremont for fire protection. According to today's Argus newspaper, Union City Fire stations #1, #2, & #3 will become Fremont Fire stations

12, #13 & #14. The newspaper also states that in about 90 days, the Union City stations will be dispatched from Fremont Fire's Comm Ctr. Until that time Union City will continue to dispatch those units.

☛ Just in from Rod Smith (BASE 12): Radio Shack has opened a new "outlet" store at 3828 Stevens Creek Blvd. in Santa Clara. This is their only Northern California outlet store and is where you can inexpensively pick up discontinued, refurbished, one-of-a-kind items. The outlet store is near the intersection of Saratoga Avenue and Stevens Creek Blvd.

⋮



Well, BASE members, that's a wrap for the July and August 1994 issue of *The Listening Post*! Don't forget, we can't make the newsletter a success without all of us helping and submitting articles and information. **Be a contributor - not a reader.**

God bless my sweet wife, she's stuck with a radio nut

The BASE Club - Nobody Does It Better!

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New mobile units from \$360**

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Pocket BankPaks

If you've been having a little trouble lately keeping track of all your scanner frequencies and thinking that perhaps the old mind needs a board swap, think again. You don't need a trip to the brain repair specialist—you just need to get *organized*. Pocket BankPaks, from Design EQ, can assist your transition from total disarray to total recall. BankPaks are modular frequency organizers, designed especially for scanner owners.

We created the BankPak family because today's scanners hold hundreds of individual frequencies. With such a large number of channels, keeping track of each channel's contents has become a chore. With the BankPak system, you can carry a complete listing of your frequencies with you, in a small, durable package, organized by bank and channel.

The Pocket BankPaks consist of custom-printed forms designed for 100-, 200-, or 400-channel scanners, plus protective plastic cards and a card ring. You record your current frequency information on the forms, place them in the protective plastic cards, and connect the pack with the card ring. The whole package fits neatly into your shirt pocket! If you change the contents of your scanner, simply record the new information on a new bank form and replace the old form. With the BankPak system, you can always keep current information with you at home, at the office, or in the field.

Pocket BankPak Family[™]

Card size: 3" X 4 1/2"

Pocket BankPak 100A

Uniden BC-100XLT
Uniden BC-120XLT
Uniden SC-150B/Y
Radio Shack PRO-35
Radio Shack PRO-46
Radio Shack PRO-2027

Pocket BankPak 100B

Uniden BC-590XLT
Uniden BC-760XLT
Radio Shack PRO-2026

Pocket BankPak 200

Uniden BC-200XLT
Uniden BC-220XLT
Regency R4030
Radio Shack PRO-34
Radio Shack PRO-37
Radio Shack PRO-39
Radio Shack PRO-43
Radio Shack PRO-51
Radio Shack PRO-2022
Radio Shack PRO-2032
Shinwa SR001

Model # PBP100-A

6 cards, 3 forms per bank
(30 forms), and a card ring.

Model # PBP100-B

3 cards, 3 forms per bank
(15 forms), and a card ring.

Model # PBP200-A

6 cards, 3 forms per bank
(30 forms), and a card ring.

\$12.95 plus \$1.25 S&H

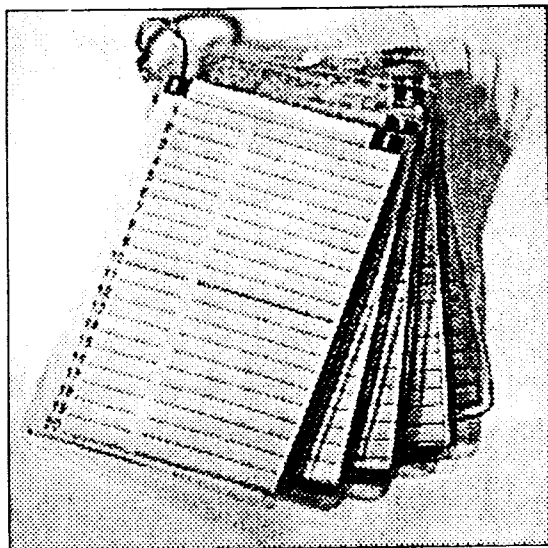
\$7.95 plus \$1.00 S&H

\$12.95 plus \$1.25 S&H

Total Recall

The BankPak system makes it simple to move all your frequency assignments from their current locations (the backs of envelopes, scraps of paper, and the dark recesses of your mind) into a neat, orderly, portable package. Instead of grasping for a frequency that's on the tip of your tongue, you'll have complete frequency information at your fingertips.

Pocket BankPaks are available for over 20 of today's most popular scanners.



Shown above: The Pocket BankPak 200.

All Pocket BankPaks come with a frequency allocation chart.

Pocket BankPak 400

Radio Shack PRO-2004

Radio Shack PRO-2005

Radio Shack PRO-2006

To order a BankPak, find your scanner model on the left. Specify the appropriate BankPak model number for your scanner and send a check or money order for the proper amount (including shipping and handling) to:

Design EQ

P.O. Box 1245

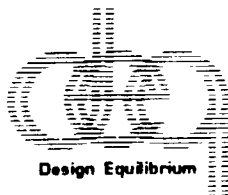
Menlo Park, CA 94025

415-328-9181

Model # PBP400-A

11 cards, 4 forms per bank
(40 forms), and a card ring.

\$15.95 plus \$1.75 S&H



B.A.S.E. CLUB
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JULY-AUGUST 1994

 A check here means this is your last issue. To continue your membership in the exciting BASE Club and participate in upcoming activities, send \$25.00 for six bi-monthly issues, and mark "renewal."

