

Worldradio/NEWS

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Shriners/Hams help burned girl

LOS ANGELES, Calif. -- A severely burned little girl is alive today, thanks to the efforts of Amateur Radio operators who passed along a coast-to-coast emergency message when commercial channels failed.

Mary Anne Felby, 8, daughter of Mr. and Mrs. Robert C. Felby of nearby Temple City, and her nine-year-old sister were badly burned while on a family camping trip when a heater exploded, igniting their tent. The girls were admitted to the burn unit of a local hospital, where the older girl died a few days later.

Three weeks after the explosion and fire, Van Harris of Temple City, a noble of Al Malaikah Shrine Temple in Los Angeles, learned the surviving sister needed treatment available at the Shrine Burns Institute in Galveston, Texas. He notified Al Malaikah officials, including Leon Saroff, hospital liaison officer of the temple.

Saroff is also a ham--WB6YFT.

With the help of staff members at the Shriners Hospital for Crippled Children in Los Angeles, it was learned the little girl's condition was critical, but stable enough to permit a cross-country transfer. Shriners also took the lead in a community effort to raise funds so the little girl's mother could accompany her and stay in Texas with her.

Arrangements were complete except for transportation from California to Texas--and that, with time pressing, was when matters began to fall apart.

A transfer of the critically burned girl was possible only by air transportation, and charter costs of an air ambulance, plus required accompanying nurses, runs into the thousands of dollars.

But the U. S. Air Force has its own aircraft for such emergencies. Saroff called--tried to call--Dan Leary of the air force's Directorate of Air Evacuation at the Pentagon, near Washington, D. C., for official authorization for the mercy flight.



The team that helped Mary Anne Felby, from left, Air Force Capt. Ragland, Dan Hagen, president of the Shriners in Riverside, Calif., home of March Air Force Base, Col. George Fong, deputy commander of March Air Force Base, and Leon Saroff, WB6YFT, of Al Malaikah Shrine Temple, Los Angeles.

Saroff found he was unable to reach Leary--all cross-country circuits were tied up. Despite the critical time factor, there was nothing for Saroff, the Shriners and the burned girl and her family to do but wait... but Saroff didn't feel like waiting and, as a ham, he knew what to do.

It still took some international doing before Saroff could contact Leary--or, as it turned out, Leary contacted Saroff.

The Shiner got on the air and managed to raise Phil Kahn (XE1FFF) of Cuernavaca, in Mexico south of Mexico City, on the

Intercontinental Net. Phil, in turn, contacted Ralph Haburton (W4ZVX) in Orlando, Fla., and Ralph got through to Robert Morris (K4HGZ) in McLean, Va. Bob--at last--was able to get a local call through to the Pentagon and Leary. The air force official made a call west to Saroff.

Permission for the mercy flight was granted, via March Air Force Base at Riverside, Calif., east of Los Angeles, and Ellington Air Force Base in Texas.

From then on, everything went smoothly, and Saroff has since learned that Mary Anne will recover from her burns.

This was the second burned child airlift Saroff and the Al Malaikah Temple Shriners have taken part in in a two-month period. The Masonic organization operates 19 orthopedic hospitals in North American nations, as well as three burn institutes, and all are open to children under 15, regard-

less of race or creed, so long as need exists.

Of the mercy airlift operation, Saroff later said:

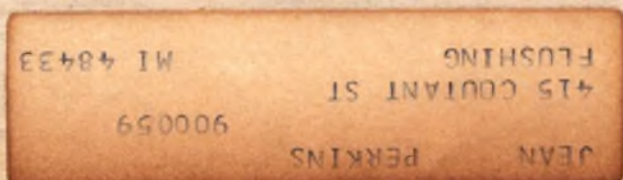
"It's wonderful being an American citizen, able to live here in the United States and know its branches of the military are here to assist in time of need."

He might have gotten in a plug for the Shriners, too, and particularly for the Shriners who are hams... and even all hams who are available when they are needed.

But, perhaps, Saroff is too modest.

Leon Saroff, as it happens, is Al Malaikah Temple's chairman of Amateur Radio.

— Additional Photo Page 3 —





Newsfront

Around the World

WA6TMQ visits Japan

by Ralph Cozad, WA6TMQ



Takao Kubota, JA2ACR, left, hosting Ralph Cozad, WA6TMQ, at Komaki Castle, Japan.

This trip was the end result of about 1,000 QSOs with Japanese stations. Hiroshi Mano (JA2AJA) was the prime factor on the decision to visit Japan, due to his many invitations to come and visit him and the Iwakura ARC.

The hospitality and friendship of the Japanese ham is the greatest that I have ever known. The club members took turns and days off work to keep me busy for the entire time I was in Japan. We visited many cities, towns, shrines and many other sights, some of them not seen by tourists as a rule.

Rich, middle class and poor all came to visit me and take me to see sights and their shacks, just like I was a VIP. I found it very hard to pay my way for anything as there was someone there ahead of me to pay the bill.

I was given two tours that do not happen to very many people, a complete tour of the Nagoya television station from the antenna tower to the control room, and the Chunichi Newspaper (the largest in Japan), and there again from the communications room to the

press room. I met... hams that worked in those, also.

In Tokyo, I met Tarch Yagi, about the most famous of Japanese hams, founder of the JARL and DX man of worldwide fame. He is now JHIWJX.

I was taken to Chiba to visit the home and shack of Fujio Kataoka (JF1CEQ), and the Chiba ARC. There again was treated like a VIP with a big dinner in my honor. Chiba is a coastal town (city) not far from Tokyo.

The club is very active in all types of radio communication, even has a Red Cross section complete with training. I was given a pennant of their club and roster of members...

To sum it up, it was a great experience for me, and all due to ham radio.

Any details, information or suggestions for visiting Japan, just ask.

(From "Overmodulation," Poinsettia ARC)

Washington Report FCC



In order to develop the recently established Amateur-satellite Service in an orderly fashion and in a spirit of cooperation with other Amateur Radio activities sharing the same frequencies, the FCC has issued a Notice of Inquiry requesting comments and suggestions for specific rules to be adopted for the new service.

The new Amateur-satellite Service was

established Feb. 4, 1973, when the commission adopted amendments to Part 2 of the rules (Docket 19547) to conform with the Geneva Radio Regulations as revised by the 1971 Space World Administrative Radio Conference. In addition, the commission allocated certain frequencies within the Amateur Radio Service to the new service.

The Amateur-satellite Service is defined as "a radiocommunication service using space stations on earth satellites for the same purpose as those of the amateur service." Space radiocommunications is defined as "any radiocommunication involving the use of one or more space stations or the use of one or more passive satellites or other objects in space." A space station is defined as "a station located on an object which is beyond, is intended to go beyond, or has been beyond, the major portion of the earth's atmosphere."

The commission pointed out that over the past 12 years it had authorized six amateur stations for operation on earth satellites under the rules in Part 97 applicable to all Amateur

Radio stations. It had granted specific temporary waivers where necessary, the commission said, when the applicant incorporated certain provisions into the design of the station, including reasonably well protected remote control command functions and very low transmitting power. On March 21, 1973, it was delegated to the Chief, Safety and Special Radio Services Bureau, authority to act on waiver requests for Amateur Radio stations on board satellites, as a temporary measure pending development of rules to govern the operation of amateur satellites.

The commission invited comments on the type of stations or functions that should be provided in the new service in addition to space stations; the requirements for station licenses and privileges, and the representations to be made in applications for licensing; and the classes of Amateur Radio operator licenses that should be a prerequisite for station licenses. Other areas in which views were requested included operating privileges; operator examinations; technical standards; telecommand and telemetry requirements; emissions; operating requirements and procedures; and station identification and log requirements.

The commission said that it would adopt a new Subpart to Part 97 of the rules, Amateur-satellite Service, based upon the comments and any other relevant information deemed appropriate.

The commission pointed out that the Geneva Radio Regulations require it to ensure that any harmful interference caused by an amateur satellite authorized in the 435-438 MHz band must be eliminated by means of appropriate devices, and that the ITU Radio Regulations require it to insure that sufficient earth command stations are established before launch to guarantee that it can terminate harmful interference.

Comments must be filed by Jan. 7, 1974.

Action by the commission Oct. 25, 1973, by Notice of Inquiry. Commissioners Burch (chairman), Johnson, H. Rex Lee, Reid, Wiley and Hooks.



November 8, 1973

The next ARRL Simulated Emergency Test will take place January 26 and 27, 1974. This serious operating exercise tests both emergency preparedness on a community to community basis as well as long haul traffic facilities. Every amateur should participate in some way in the SET and thereby help to justify the amateur service in terms of the public interest, convenience and necessity. Plan now to participate by contacting your local Emergency Coordinator. Further information can be obtained from your Section Communications Manager, address page 6, QST.

Full SET details will appear in the December issue of QST.

November 15, 1973

Carrying on the fight to keep all of 220 MHz for amateurs, the League recently filed with FCC a 72-page Opposition to Proposed Rule-making and Request for Oral Argument, taking strong issue with the proposal to put CB on that band. December QST carries a summary. Shortly ARRL will file replies to comments of industry, including those of the proponent EIA and manufacturers such as E. F. Johnson, Hy-Gain, and others which support 220 CB. Such reply comments are acceptable at FCC until November 23.

PLAN AHEAD

1974 Southwestern Division ARRL Convention to be held 1, 2 and 3 November in San Diego, CA. Location will be the Town and Country Convention Center. Sam Dear, K6BWT, chairman.

Amateur Radio is more than communication-It's a service

Amateurs Help Cancer Society

by Jack T. Shepherd, W8OMY

COLUMBUS, Ohio-- On Saturday, Sept. 22, the Central Ohio Amateur Radio Emergency Corps provided communications for 18 hours during two events sponsored by the American Cancer Society.

The morning activities began when radio operators set up base and mobile stations covering the six routes of the Cancer Society Bike-a-Thon.

Bicycle riders riding for contributions to the Cancer Society covered routes in Arlington, Hilliard, Gahanna, Worthington and Brice, plus a 100-mile-long "Snoopy" route, so called because it looks like a dog when outlined on the map.

The mobile stations traveled along the routes, calling back to the base station whenever assistance was needed by the riders. Most calls were for equipment repairs, although in some instances the riders themselves had given out and needed a lift home.

Mobile communications were aided by the use of the Central Ohio Radio Club's repeater, WR8ABV. John Richards Jr. (WB8AHP), who was in charge of communications for this portion of the event, reported that some 15 operators took part.

While the Bike-a-Thon was in its last stages, the Cancer Society's annual Treasure Hunt began. The hunters, filling 27 cars, tracked down clues leading them through 12 checkpoints, most of which were in Madison Co. Nine of these checkpoints were manned by mobile radio operators.

These operators made sure the clues were in place, relayed back the car number and time as each group of contestants came to the checkpoint and gave emergency assistance.

In at least one instance emergency assistance was needed, as one car got stuck in a ditch. Additional problems arose when some of the numbered clues had gone astray, and radioed calls back to the headquarters--set up in Pleasant View Middle School--were necessary.

Electronic assistance was rendered by Curt Mencer (WA8GMY), who was in charge of radio operations for the Treasure Hunt. Curt and his assistants manned the sirens, whistles and other noises coming from the "haunted house" which was the site of one of the checkpoints.

Since the checkpoints had not been chosen for their excellent radio qualities, it sometimes took coordination to broadcast the car arrivals. This involved one radio car in a valley near the checkpoint site to take down car numbers and times and another car a half-mile away on a hill to relay to headquarters. In addition, the weatherman did not cooperate, and thunder, lightning and rain made the communications difficult at times.

At midnight, 26 tired radio amateurs gathered at the school with the treasure hunters to talk over the evening's incidents and congratulate the winners.

(From the Columbus, Ohio, "Dispatch")

Story on page 1

Shriners/Hams help burned girl



Burn victim Mary Anne Felby, 8, aided by Shriners and hams.

ARRL Election

ATLANTIC

Director: McConaghy (W3SW), 3836; Hippisey (K2KIR), 1637.

Vice Director: Bieberman (K3KT), 2811; Lamb (W3BWZ), 1309; Smith (WA2KND), 738; Van Dyke (W3HK), 626.

DAKOTA

Vice Director: Kulas (WAØIAW), 477; Gray (WAØCPX), 466.

DELTA

Vice Director: Sanders (WB4ANX), 819; Coffey (W5NCB), 759.

GREAT LAKES

Vice Director: Clausen (W8IMI), 2222; Zimmerman (K4FU), 1244.

MIDWEST

Vice Director: Pitner (WØFZO), 1286; Miller (WAØKUH), 659.

PACIFIC

Director: Gmelin (W6ZRJ), 1537; Wical (KH6BZF), 1057.

Vice Director: Gaetano (W6VZT), 1386; Stilwell (W6NJU), 1197.

SOUTHEASTERN

Vice Director: Wayne (WB4CBP), 1741; Gauzens (W4WYR), 710; Roux (K4THA), 617.

Newly elected officials will assume office on Jan. 1, 1974.

FCC Ham Chief at SAROC

Prose Walker, W4BW, chief, Amateur Division, Federal Communications Commission, will speak at SAROC. His paper will be titled, "Background Philosophy of Repeater Rules, Docket 18803." His talk will be followed by answers to questions submitted in writing. Remaining questions will be taken to Washington, D. C. for detailed study.

John Huntoon, W1RW, general manager, ARRL, will address the SAROC meeting for the first time and take part in the ARRL Forum.

Among meetings to be held will be OOTC, QCWA, WCARS and WPSS.

Those attending SAROC who would like to share driving expenses (and energy), send SAROC your estimated departure date, route, return time and telephone number... include a SASE post card. SAROC will endeavor to return your card with information received from others in your area or along your route.

The Seventh National FM Conference will be held Friday and Saturday. Repeaters on 16/76, 28/88 and 34/94.

WCARS-7255 and WPSS-3952 will be on the air to assist incoming mobile operators.

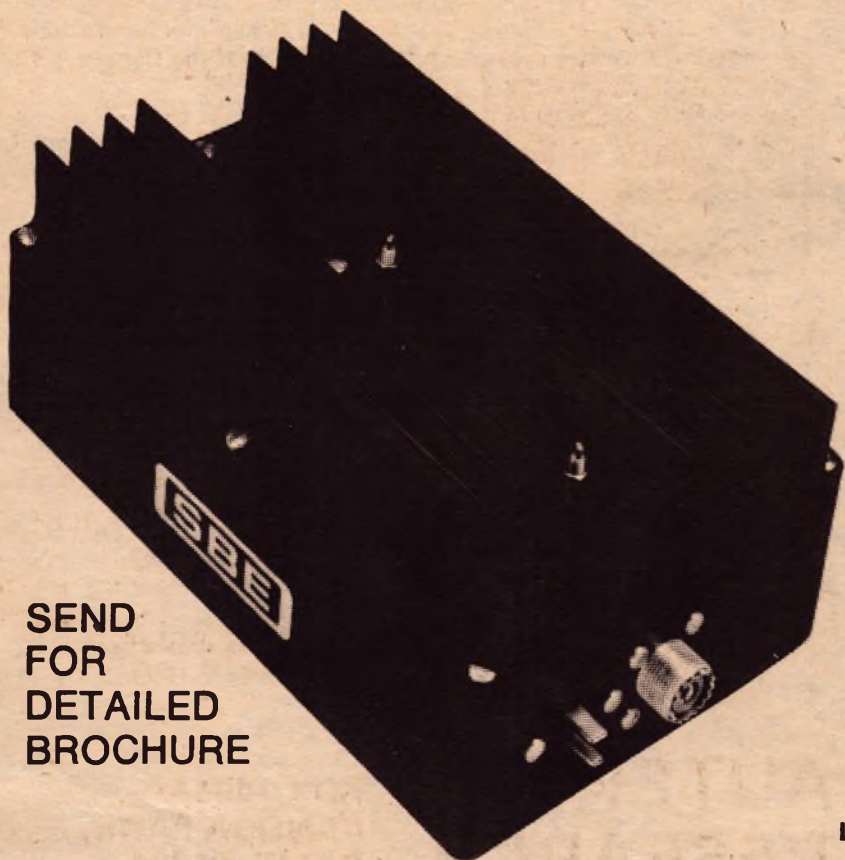
SAROC will be held from January 3rd to 6th. Accommodation requests are to be sent to the Flamingo Hotel, Las Vegas, NV 89109. Registrations are to be mailed to SAROC, P. O. Box 73, Boulder City, NV 89005.

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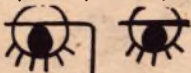
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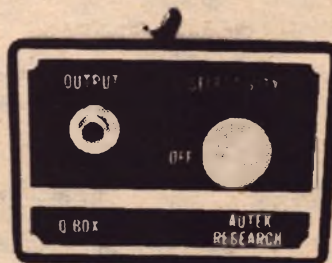
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Ham "travels" the world

by Doris Burrell

WAYNESVILLE, N. C. -- Some kinds of education don't come from a school. Joe Pressley of Canton, for example, has gained a wide knowledge of the world through a hobby.

Pressley is a ham radio operator, one of those dedicated enthusiasts who can tell you off hand what life is like in a Samoan village or what the current temperature in the South Pole happens to be... because he spends much of his time making contact via his

radio with people all over the world.

And Pressley has found a way to turn his hobby into a helping hand for others, serving in emergencies or setting up telephone conversations between loved ones in far places.

He's one that makes contact with the 22 American men stationed in Antarctica (where the temperature sometimes drops to 150 degrees below zero) and sets up patches (patched together telephone conversations) between them and their families.

Pressley is a retired Champion employee. Two years ago last February, he became interested in Amateur Radio. He took and passed a strict examination given by the Federal Communications Commission, set up his equipment in an enclosed porch at his home. The walls are covered with maps, and clocks show the time everywhere in the world. There he spends "some of the most enjoyable hours I've ever known."

Setting up patches for separated families is one of the most satisfying aspects of his hobby, he says.

He has set up communications between missionaries from both South America and Africa to their families here in the U.S., helped get messages to loved ones from Managua, Nicaragua, shortly after the devastating earthquake about a year ago, and helped get relief into stricken areas.

He has talked at length with persons on the high seas, lonely men who just want to talk for a while or to relay a message to their wives or girl friends somewhere in the states.

Conversations with people in Scotland, Germany, Hawaii, South Africa and nearly every state in the union have brought hours of pleasure to Pressley and his family. Many times he receives letters or cards from the folks he has talked with, and a number of momentos have been sent.

Pressley says he has learned much about life at the South Pole

for the 22 men stationed there, including two from North Carolina, "Dozer Dick" from Moorehead City and "Sugar Pops Dan" from Greenville.

The others have nicknames too.

A newspaper called the "South Pole Onetime" is published there and relayed back to the states by the ham operators, and the men report they keep busy with activities such as Easter egg hunts, "deepfreeze hikes" to the garbage dump and standing watch at the generator. Of course, they are also involved in running scientific tests in the area, and pranks and kidding run rampant too.

They are 10,000 miles south of Washington, D. C., and each is assigned to the location for a year. To them, says Pressley, it seems like an eternity, and they cling gratefully to the ham operators as a contact with the outside world.

They tell him that their sanity would be in danger in the cold and lonely spot if ham operators didn't occasionally pick up their radio signal, get a fix and response and set up a patch so the men can talk to their families to hear all is well.

Pressley is one of hundreds of ham operators who stand by in emergencies to lend that helping hand. What started out as a hobby for him, has become for him a way to know other people and share a bit of life with them.

(From the Waynesville, N. C. "Mountaineer")

Air Race

by Andy Andrews, VK2BMA

DUBBO, Australia-- The recent Sydney to Dubbo Air Race has been hailed as a great success, and I would like to tell you of a few amateurs who contributed their time and energy to this object.

About two months before the race, the State Emergency Service Signals Section, Macquarie Division, of which I am a member, was asked to provide radio communication facilities for the air race.

Basically, what was required in our area was a radio link between Mudgee Airport and the headquarters at Dubbo, and also a radio link between the marker area which nonstopping planes flew over and identified to and Mudgee Airport, a distance of about four miles.

The main link between Mudgee and Dubbo was to be with the State Emergency Service SSB sets on their frequency of 3,743 kHz, whilst the local link was to be with "Pony" transceivers on 27.230 MHz.

Some doubt was expressed on the reliability of the HF commun-

ications link due to the normal daytime conditions on the 80 meter band, and it was decided to invite the amateurs in the area to participate in setting up a secondary channel on 2 meters through the Orange Amateur Radio Club's repeater on Mt. Canobolis, Fred (VK2AOA-RI). The amateurs showed great interest and many points were discussed on the 7:30 p. m. rag-chew on following evenings.

On the Sunday preceding the race, the SES contingent for Mudgee went to the airport for a dummy run on their equipment, and to erect a 60-foot mast to take the 80 meter inverted V. Robert Alford (VK2ZRJ) and Alan Wright (VK2BVL) made the trip from Orange.

Meanwhile, at Dubbo, Ces Kearnes (VK2AKC) has constructed a 2 meter beam from eight gauge fence wire with an SWR of 1-1.5 (we will have to check his SWR meter), and this had been fixed to the roof of the SES Headquarters at Dubbo, and no difficulty was experienced in triggering "Fred" at Orange.

Robert and Alan at Mudgee experienced difficulty in getting through to the repeater using a ground plane and it was obvious that further thought had to be given to the matter. The SES HF system to Dubbo worked perfectly,

but the important link between the marker area and Mudgee was poor.

During the next week, an offer by Tom Stroud (VK2AMR) for the loan of his beam and a mast was quickly accepted. It was dismantled and taken to Mudgee, and a quick test with the little KEN 2 watt transmitter showed that the 2 meter link to Dubbo via "Fred" was established.

Dawned the race day and Robert arrived at Mudgee from Orange at the early hour of 7 a. m. complete with beam and ground planes attached to the roof of his car. After erecting a ground plane at the airport, he joined the frozen band of stalwarts in a frost-covered paddock four miles away. A fire that had been started to provide some warmth had to be extinguished as the smoke was concealing the marker from being seen from the air. Robert erected a beam on a pole in the middle of the paddock and established a Channel B 2 meter link back to the base, and for the rest of the day he was kept very busy transmitting the marker changes and the identification numbers of the planes that passed overhead. Bill Baylis (VK2BVW) and Ken North (VK2ZAN) travelled up from Bathurst to assist.

Due to the exceptional conditions on 80 meters, the Secondary 2 meter link to Dubbo was not used. However, after the race was over

the controller of the Macquarie Region SES was able to talk to his Mitchell Region counterpart in Bathurst (Bill Baylis) over the 2 meter "Fred" link and was impressed what can be done with VHF and a repeater.

(From "Amateur Radio," Australia)

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Calling all Canadian ships

by Betty Campbell

VICTORIA, British Columbia-- For the last seven months, instead of spending his evenings and weekends chit-chatting to fellow ham radio operators around the world, Dave Buick (VE7ANE) has been trying to ease the pangs of homesickness for Canadian Navy personnel abroad and their families at home.

Master Warrant Officer Buick, with a handful of other servicemen hams stationed at the Canadian Forces base at Esquimalt, operates a "personal radio-telephone service" for the crews of Esquimalt-based ships.

The service was started three years ago by Warrant Officer Al Fast (VE7AXI), an electronics instructor who was operating the receiver-transmitter on shore. Buick, a sonar operator aboard the HMCS Mackenzie, volunteered to work the special radio.

Since then, four more West Coast ships have been licensed as Amateur Radio stations--the Chaudiere (VEØNWA), Gatineau, St. Croix (VEØNWD) and Terra Nova (VEØNU). It is now possible for a sailor to talk to his family from almost any place in the Pacific by a telephone connection "patched

in" with the transmitter-receiver in Victoria.

Fast completed more than 700 calls last year.

And this summer, while Fast was in Quebec taking a special course, Buick concentrated on the destroyer escort Terra Nova, which was standing by off the Vietnam coast as backup to Canada's peacekeeping force.

Each evening, he would contact sailors' wives and tell them to stand by as he called in the ship and his list of 141 crewmen.

"It's a strange feeling talking to your husband halfway across the world," says Joan Mogentale, whose husband, Lt. Joe Mogentale, serves aboard the Terra Nova.

"You want to say all sorts of things, but you talk about dumb things like the car needs new tires or of the television's gone wrong. I told Joe I had trouble with the toilet and should I call the plumber."

And the answer, from off the coast of Vietnam: "He told me to turn a certain screw and that would fix it. It did."

Roberta Palmer was busy giving

birth to her first son Colin on April 27 and felt "kind of low" because her husband, Sub. Lt. Malcolm Palmer, was away "somewhere at sea off Mexico" on HMCS Chaudiere.

The following day Roberta received a telephone call at Victoria General Hospital. "I couldn't believe it. It was Malcolm and all I kept blurting was, 'It's a boy, it's a boy!' It sure was nice to hear his voice."

Buick reminds callers to avoid bad news or money matters.

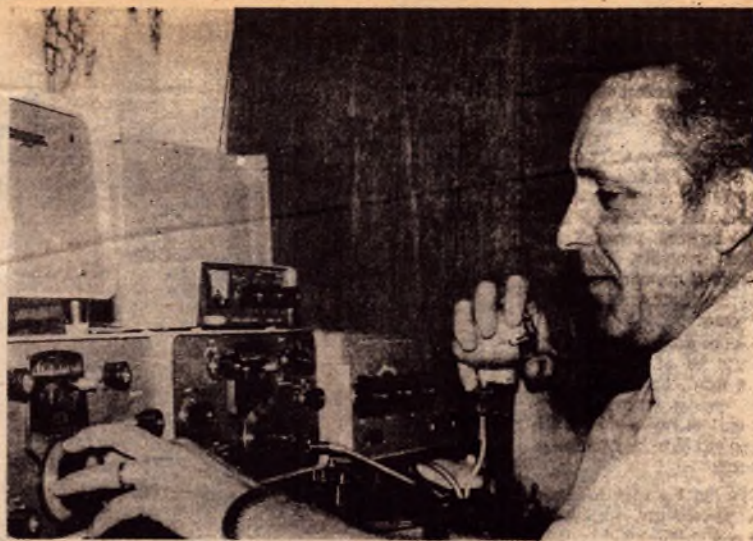
"That's for the official communications department--ours is the

personal touch. Guys at sea get firsthand information on repairs needed on the family clunker and how Johnny made out in last night's baseball game--the really important stuff."

All of the navy wives agree the service is a real morale booster.

Now that Al Fast is back in Esquimalt, he is organizing a ham radio club of wives and teenagers as well as a winter course to train volunteers to become radio operators to help with the transmissions to the ships.

(From the Vancouver, B. C. "Sun")



WARRANT OFFICER BUICK . . . connecting ships and families —Betty Campbell photo

Tornado Drill

ELMIRA, N. Y. -- A handful of Chemung Co., N. Y., radio amateurs talked their way out of a tornado that touched down in Webb Mills at 2 p. m. on a recent Sunday afternoon.

Although the disastrous natural force wound its way up Seely Creek and generally along the path of Rt. 328 to Elmira, there were no casualties and almost no one noticed.

The tornado was simulated, but the response was real. In a communications test, the Chemung Co. Amateur Radio Emergency Corps (AREC) sought to test its readiness for a disaster.

H. Mettler Henrich (K2DNN), county civil defense communications director, called the test "very good. It showed that what we wanted could be done. . . we can contact other points in an emergency."

The purpose of the test, Henrich said, was to determine to what extent amateur operators could supplement official channels in an emergency.

Through the use of a new radio repeater system established by the Southern Tier Amateur Radio Repeater Society (STARRS), local operators contacted Binghamton, Corning and Montour Falls during the simulated tornado.

A repeater picks up local radio messages of limited strength and increases the signal's power so it can be carried farther.

Probably the most important result of the test, Henrich said, was establishing a 1.5-minute contact with the Binghamton-based emergency weather service. In another 1.5 minutes, a radio contact in Binghamton had returned emergency weather information to Henrich, stationed in the Williams Street CD headquarters.

Emergency two and six-meter radio stations were tested for operations at the Arnot-Ogden and St. Joseph's hospitals, Elmira City Hall, CD headquarters, American Red Cross headquarters, and in volunteer fire departments in Southside, Pine City, Golden Glow, West Elmira and Erin.

Five mobile sets were tested, and Henrich found contact available with Corning, Montour Falls and Endwell hospitals.

In time of emergency, Amateur Radio operators outside disaster zones would contact, probably by telephone, emergency medical and police authorities in their area who would be needed here.

Sunday was the first test of the new repeater system, purchased by STARRS for just such a need. The antenna is located on Hawley Hill, atop the existing tower used by both local TV stations, Henrich said.

Some of the 27 operators in the ten separate locations involved in the test were "knocked out of operation" by the tornado, and used emergency battery power. The duties of some were assumed by other units.

County and city government agencies took part in the test, but only to place officials in monitoring stations where orders would be issued if government communications failed.

Henrich said the airwaves were extremely active during the test, but did not interfere with the disaster simulation. County CD Director Arthur Sykes said, "The idea of the test was to get people excited and find out where the system would break down. We did that very well."

Four such tests will be held each year.

(From the Elmira, N. Y. "Star-Gazette")

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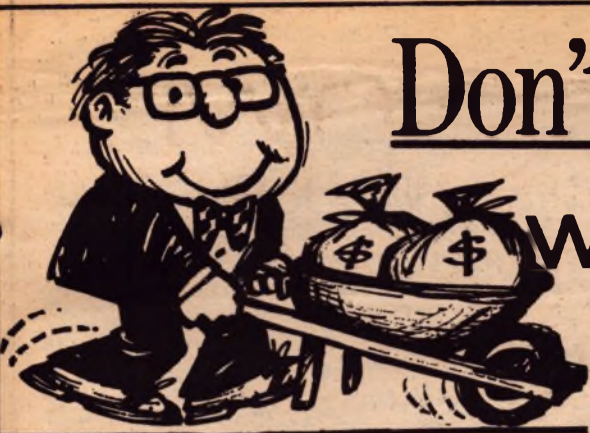
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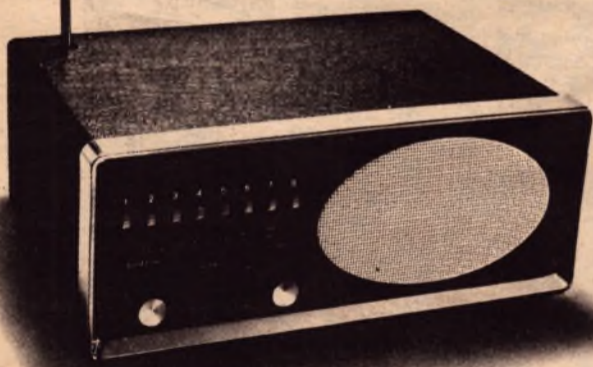
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J U L I O



Julio Ereneta of Valencia Park adjusts a dial on his ham radio equipment so he can contact a Mexican radio operator to warn of a hurricane near Navoja, Mexico.

by Craig MacDonald

SAN DIEGO-- Julio Ereneta of Valencia Park once threatened to break Arthur Godfrey's ukulele if the television personality would not stop singing.

That was in 1921 when both men were students at the U. S. Naval Radio School at Great Lakes, Ill., and Ereneta was studying for exams.

Godfrey developed into an entertainment star, while Julio became a star of renown with people throughout the U. S. and Mexico.

While Godfrey was acting on radio and television, Ereneta was warning Mexican villagers of hurricanes and the California Highway Patrol about collisions.

Ereneta, of 412 Los Alamos Dr., is a ham radio operator, W6ZOM, and a member of the West Coast Amateur Radio Service to aid in a variety of emergencies, ranging from automobile accidents to hurricane disasters.

Every day, Ereneta, 72, listens to his ham set, often for hours at a time, scanning the frequency dial, trying to sift the words "break, break, break" from the static. This is the signal for an emergency, and when Ereneta hears it, he determines the origin of the call, what the trouble is, and what he can do to help.

Hadley School for the Blind

Blind persons interested in becoming Amateur Radio operators can now prepare themselves for official licensing and successful experience as "hams" through a special free correspondence course developed by the Hadley School for the Blind, Winnetka, Illinois.

Titled "Amateur Radio Theory," the course was launched six years ago and rapidly became one of the school's most popular studies--so popular, in fact, that a ceiling had to be placed on the number of active enrollments and a waiting list grew.

On March 15, 1967, Ereneta received a faint call from a ham in Guadalajara, Mexico, informing him about three men who sent a signal that their raft was waterlogged and sinking slowly near the Galapagos Islands.

Ereneta called the Coast Guard, which sent a plane to rescue the men.

The Mexican radio operator had heard about Julio, a native of the Philippines who learned to speak Spanish by talking with a ham in Navaja, Mexico.

"I'm known by the Mexicans as a revolutionary because of my call letters. 'Z' stands for Emiliano Zapata, 'O' for Gen. Alvaro Obregon, and 'M' for Francisco Indalecio Madero--three Mexicans who sided with the plight of the masses," he said.

Whenever there is a hurricane brewing off Baja California, the National Weather Service notifies Ereneta, who contacts ham operators in the area of Mexico near the hurricanes.

The retired U. S. Navy warrant officer plots each hurricane on his map and is kept informed of changes in direction and speed of the hurricane by the weather service.

"There are many fishing villages which are endangered when a hurricane is headed in their direction,

Now taught by course-designer Byron Sharpe (W9BE), and a second Hadley instructor, Amateur Radio Theory has been opened to unlimited enrollments and the word is spreading. Already approximately 50 prospective "hams" have been graduated, almost all of them are on the air, and nearly 100 are presently enrolled.

The students vary greatly in age, background and geographical location. They reside in all parts of the United States and in such faraway places as Scotland, Mexico, New Zealand, the Philippines and India. One graduate is an 82-year-old medical doctor who recently lost his sight; another is a high school senior who has been blind since birth.

Offered without cost, Amateur

especially since a lot of these villages have no telephone communication and only a small road leading to them," said the father of three sons and two daughters.

"There is no civil defense system in Mexico, like we have here, so a ham operator is often the only one who can warn the villagers to head for high ground," he said.

Robert Baum, a marine meteorologist at the East Pacific Hurricane Center in San Francisco, said Ereneta is providing the Mexicans with an invaluable service.

Jose Sales, director of the Mexican Government Tourist Bureau in San Diego, said he often finds out, through Julio, what the truth is about a storm in a particular area of Mexico.

"Julio's communications via radio are very important to the Baja area because there is no other warning system in that area," Sales said.

Ereneta's radio actions have been important in saving lives in California, Washington, Oregon, Nevada, Utah and Arizona.

By listening intently to 7, 255 kHz, the band for the West Coast Amateur Radio Service, Ereneta can receive information about an auto accident from a mobile ham and can call for emergency help. He has been able to send doctors to injured people and firemen to a blaze in the mountains or deserts.

Ereneta said he likes his hobby because "I like people-to-people contact. We hams discuss our hobby but we never venture into topics such as religion or politics."

In Mexico, the Liga Mexicana de Radio Experimentadores has honored Ereneta for his service "to the welfare of Mexicans..."

And of that incident a half-century ago, Ereneta, an unofficial ambassador of good will for the United States, said, "I really wouldn't have broken (Godfrey's) ukulele. He needed it for communication."

(From the San Diego, Calif., "Union")

Radio Theory is available in Braille and on tape. The 14 lessons present essential topics: alternating and direct current; vacuum tubes and their uses; transmitters, receivers and antennas; Morse code; and the regulations of the Federal Communications Commission. Each section of the text includes a series of questions designed to gauge the student's understanding of the material. The student types or tape-records his answers and sends them to his instructor, who in turn responds with a personalized letter or tape of correction, explanation and encouragement.

By mastering the content of the lessons, the prospective "ham" prepares himself to take the FCC

(Turn to page 52, please)

THE NIGHT BEFORE CHRISTMAS

Adapted by Phil Wight, VS6DR

Twas the night before Christmas,
and all through the shack,
Not a creature was stirring,
except OM Mac.
The coax was hung
by the chimney with care,
The standing wave ratio
stayed low with it there.
The wife in the bedroom
and I at the mike
Had just settled down
for a long DX night,
When out on the lawn
there arose such a clatter
I sprang from the rig
to see what was the matter.
Away to the window
I flew like a flash,
Tore open the shutter,
threw open the sash.
The moon on the crest
of the ninety-foot tower
Gave no hint at all
that I ran too much power.
When what to my wondering eyes
should appear,
But a miniature sleigh
and eight tiny reindeer,
With a little old driver
so lively and quick,
That I knew in an instant
it must be Saint Nick.
More rapid than eagles
his coursers they came,
And he whistled and shouted
and called them by name.
"On Dasher, on Dancer,
the long path is fading.
"Old Mac will miss Spratly
if we keep him waiting.
"To the top of the rock,
to the top of the wall,
"Now dash away, dash away,
dash away all."
So up to the housetop
the coursers they flew,
With a sleigh-full of gear
and St. Nicholas, too.
And then in an instant
I heard on the roof
All the clattering noise
of each galloping hoof.
All bundled in fur
from his head to his foot,
His clothes were all tarnished
with ashes and soot.
I drew in my head
and was turning around
When down the chimney
he came with a bound.
A bag full of gear
he had slung on his back,
And he looked like an old peddler
just opening his pack.
He pulled out a box
with my name on the front,
And then he exclaimed,
"I don't mean to be blunt,
"But the rig that you're using
has seen its best days;
"With this rig you should make
the Honor Roll by May."
He spoke not a word
but went straight to his work.
He set up the gear
and then turned with a jerk,
And laying a finger
alongside his nose,
And giving a nod,
up the chimney he rose.
He sprang to his sleigh,
to his team gave a whistle,
And away they all flew
like the down of a thistle.
But I heard him exclaim,
ere he drove out of sight,
"Happy hamming to all,
and to all, a good night."



Ham operator Harold Moreau, left, and Barney O'Brien, who just received licence.



Gerry Barolet operates key as Jean Sorel takes down message on typewriter.

Staff Photos by Peter Brosseau

He's now awaiting his government-assigned call letters and a transmitter-receiver kit supplied by the Canadian National Institute for the Blind at a nominal rental of \$15 a year.

The unit will be assembled by his sponsor, Harold Moreau, an oil company fleet inspector and long time ham who will oversee its operation.

The course urgently needs more sighted amateurs like Mr. Moreau who are willing to help blind persons become hams, said its co-ordinator, Walter Dolphin. A member of the Montreal Amateur Radio Club, he launched the project in co-operation with the CNIB, which backs similar programs across Canada.

Mr. Choquette, a retired auditor, and Mr. Moreau handle Morse Code instruction, while blind ham Jean Boule teaches radio theory.

"A blind radio man," said Mr. Dolphin, "can't get his license until he has a sponsor. We only have two at the moment and need four more."

"This kind of work is a two-way street-- you help another person but you also get real satisfaction yourself. And we'd be happy to train a sighted sponsor with absolutely no experience in ham work."

"He could pass on what he knows as he learns it. What better way to practice?"

Amateur Radio has a natural attraction for the blind, he added. Usually inveterate talkers, they quickly establish contact with hams thousands of miles away. Some put their skills to work, becoming police switchboard operators, for example.

"As it is, they often transmit code to one another over the telephone and tape record it for later study. They also record theory lessons to play back later."

The would be hams, whose ages range from the mid 20s to late 60s, hope to gain their licenses by the end of next month, provided enough sponsors can be found.

The course is expected to resume in the fall with a new group of students.

(From the Montreal, Canada, "Star")

Blind study to be "Hams"

by Brian Moore

MONTREAL, Canada-- Jean Sorel, a tall Haitian blind since birth, was taking down the Morse Code message tapped out by Gaston Choquette at the other end of the table.

"Bon soir, mes amis," Mr. Sorel slowly typed on the small portable, "je suis content de voir que tout marche bien..."

Around him, five other blind men sat motionless, concentrating on the high pitched dots and dashes that filled the third-floor classroom at the CNIB's Guy Street quarters.

Finishing the message, Mr. Sorel flashed a triumphant smile, adjusted his paper and began transcribing the next passage sent out by Mr. Choquette's code oscillator.

A visitor soon learns that blind radio enthusiasts studying to be full-fledged "hams" waste little time worrying about their limitations as they tackle the intricacies of Morse Code and radio theory.

The six men have been meeting weekly for more than a year to train for a Federal Department of Transport ham license.

Four others have already made the grade, including Barney O'Brien, a 68-year-old retired salesman, who won his license April 25.

"I'm on cloud nine," he said. "I had to pass an hour-and-40-minute exam on sending and receiving code and theory work."

Blinded by detached retinas in 1966, Mr. O'Brien was confident enough in the test's outcome to have a 40-foot radio antenna set up beside his house in Greenfield Park.

MSI

by H. Alan Harp, WA4SVH

One day after waiting through a pile up for more than two hours to work Andorra, I suddenly realized that I had already worked it several years ago and already had DXCC credit for it. I had spent all that for naught.

This set me to thinking about what to do to prevent this fiasco from occurring again. Such frustrations often lead me to violence where I take my DI04 and smash out the glass of the dial and meters of all my equipment and after beating the XYL and the harmonic, I suddenly come to my senses when the dog is attacking me.

Since the whole thing stems from my lousy memory (What did you say your name was?), I decided to buy an electronic memory. I decided to buy a Wombat II minicomputer, a new device with L.S.I., M.S.I. and 80K memory (I think L.S.I. means "lots of stuff inside," and M.S.I. means "more of the same in-

side."). This, along with a two-finger teleprinter, allowed me to data log all my station records. Now I have stored programs where I can type in any prefix or call and it will print out the date, time and frequency of past QSOs, along with name and QTH.

Now I could tell a fellow whom I had previously worked his name before he tells me, when we had worked before, and on what frequency. I also didn't sit through any more pile ups to work countries, counties or states I already had confirmed because I could query the computer of the DXCC status of all countries.

All this left me with a lot of time on my hands to play with my computer. Storage soon became a problem and a couple of disc packs were added. Since I like to work CW, I developed a programmable keyer and programs that would call CQ automatically. This was followed by a CW receiver-decoder which would print out CW characters as they were received. This was followed by programs that would automatically store name, QTH, time and frequency in the log memory. Another program that could be called in at the touch of a button would answer, saying, "TNX (name inserted) for QSO from (QTH inserted). Best 73s. Hope to wrk uagn. (call inserted) DE WA4SVH SK."

Now I am sitting back having push-button QSOs which left me with still more time to think of ways to automate the shack. A programmable VFO was designed, followed by a complete system of servo mechanisms hooked up to tune the transmitter.

Now a program was written to sweep the band looking for rare DX and other CQs in that order. When a rare DX station was sensed, the VFO would lock on it and the transmitter would automatically call in every time it stood by, regardless if it was the end of the QSO or not. The DX stations would soon work me in order to get rid of me.

Now I could program the station to keep working even after I hit the sack. I can just get up in the morning and read a printout of what I had worked last night. I soon had worked all the counties in the United States, as well as over 300 countries. I entered the CW DX contest and beat the West Palm Radio Clubs Multioperator entry. This gave me endless satisfaction.

About this time, the XYL woke me up and demanded to know what I was smiling about...

(From the "Florida Skip")

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TRANSMITTER: • RF Output Power: 1 Watt minimum • Frequency Deviation: Adjustable to ± 10 kHz maximum, factory set to 6.0 kHz. • Multiplication: 12 Times

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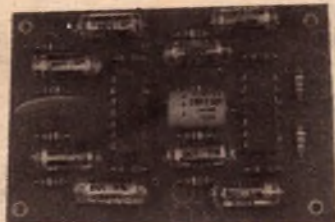


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BOX 126 - AGINCOURT - ONTARIO - CANADA



Inter-nation Possibilities

by Carl Sletten, WIYL

One of the unique advantages of Amateur Radio is the ease with which leisurely, unobtrusive visits can be made regularly with foreign nationals all around the world. Hams have been slow to appreciate the fascinating inter-nation opportunities that have remained largely undeveloped. This note is just some personal reflections on these possibilities based on my limited (20 years) experience on the ham bands and some travel abroad.

Ham radio is largely a product of U.S. early leadership in radio technology starting in the early 1900s, when the discoveries of Marconi, Hertz, Faraday and others (mostly Europeans) were largely explored and exploited by American experimenters and inventors. In viewing the spread of radio abroad, especially in less developed countries, we must not forget the intense satisfaction our first hams had in building and testing components. This phase of our

hobby produced generations of skilled radio engineers and technicians; education is still the primary benefit to the economies of Europe, Japan, Canada and the U.S. In much of Africa, South America and Asia, the educational and skill values of ham radio to persons entering the 20th century technology are tremendous. Generally speaking, radio is not being introduced into the third world by builders and technicians, but rather by wealthier and older people who can buy commercial SSB stations fully equipped. These people often don't know much about practical or theoretical radio and rarely know the code. Still, there is a class of operators in these emerging lands that build their own equipment and often use code because such equipment is simpler, cheaper, consumes less power, and code makes it easier to operate with a few English words and Q signals. Operators in the technologically developed countries could seek out these struggling foreign hams by establishing schedules and nets contact and perhaps give them some helpful information on parts, designs, and make tests on frequency stability, antenna performance, etc. Practically speaking, ham magazines could run a column connecting such people.

We should not ignore the foreign ham who purchased all his equipment and operates SSB mainly on 15, 20 and 40 meters. In many cases these operators get their first cultural contacts with the U.S., Europe and Canada on the radio. For these people, international radio is a matter of great prestige. In it they have an international calling card and their capabilities are respected in their

communities. It is unfortunate that the words "amateur" and "ham" have become so tightly associated with our hobby. It is questionable who the "professionals" are in radio anyway--perhaps the radio announcers or the college-trained engineers. Our activities are different than for such persons paid for their services in commercial telecommunications. Ham acting is associated with a rather poor performance on stage and has a derogatory connotation. We need a better name for our hobby to enlist doctors, lawyers and professionals in foreign lands who are joining with us. These people seek international ties with people of like station in developed countries. They are interested in technical facts about radio and often like to practice English. Travel and acquaintance with people abroad usually interest them more than contests and phone patches. The possibility of making fine friends for reciprocal visits certainly must be recognized as an appealing possibility. These people are leaders in their societies, and when favorable international friendships develop, we certainly are contributing to a better world. If you are planning a trip, why not stop in to see a ham you have known for a long time and who invited you to visit?

In pondering these emerging nations, we must recognize that our volunteer fraternity of communicators is changing. The third world is on the move. The phone bands are full of voices in Spanish, Portuguese, Japanese and other tongues. Radio equipment is constantly being improved so that even the rare "corners" of the globe are heard frequently. The

radio spectrum is a common patrimony of all countries and emerging nations are demanding parity. An American amateur can take pride in largely originating the hobby and applying its instantaneous communication services to disasters and spreading technology and good will. New challenges are ahead in this decade. Let's join with the other technologically advanced lands in giving a helping hand to the new radio communicators and short wave operators in the less developed parts of the globe.

Recommendations

1. Petition the FCC to permit U.S. nationals to make international phone contacts in the "foreign phone bands" on 15 and 20 meters. At the present time, Americans have estranged themselves by restriction from entering spectrum where most of the world communication is taking place. We can't run both intra-nation and inter-nation traffic in the present limited "American" phone bands.

2. Establish nets for international exchanges of technical information and for practice in foreign languages.

Both CW and phone bands could be used to rally new operators to sources of help on technical questions and give the less expert operators opportunities to gain confidence and get practice in English, Spanish, Russian, Japanese, (because China may soon encourage its people in short wave contacts) Chinese, and other dominant world languages. Such nets should aim at exchange of information with both experts and "amateurs" taking part.

RA

Sent via KV4FZ 14.234 MHz
1915 GMT, 19 July 1969

His Excellency U Thant
Secretary General
United Nations, New York

To avoid an undue risk of losing human life, the multi-nation crew of the papyrus ship RA decided to interrupt the manned part of the navigation experiment upon having covered 2720 miles or about 5000 kilometers of ocean voyage. In comparison it should be stated that the shortest distance from Africa to America is about 1600 miles.

Party dismantled and with reduced sail the papyrus vessel continued its westward drift in the direction of the lesser Antilles. Our decision was unanimous and caused by the presence of large numbers of sharks jeopardizing the safety of under-water repair-work necessitated by the last storm passed through.

After two months of coexistence on an undulating raft-ship part of which was permanently awash, and with a roofed living quarter for seven men measuring nine by twelve feet, we have had ample opportunity of getting to know each other and no opportunity of getting more than an elbow-space apart night or day.

Upon our conclusion of this experiment it is our joint desire to express to you, Mr.

Secretary General, and to anyone interested in honest work for peace and the improvement of international relations, that man has too much in common to be separated by political blocks or racial barriers.

It is not an empty phrase to speak of the unity of mankind but it is a disgrace to the human family that we in the second millenium of the Christian era keep on building paper walls between us that entice and confound the majority of mankind who, for geographical reasons, have never had the opportunity to really get to know man on the other side of the fence.

We the undersigned have neither the same skin color nor the same faith. We come from different political and cultural upbringings, and speak seven different tongues. We have probably come out of this experiment as much the same individuals who entered it, at least to the extent that none of us have attempted to alter the others.

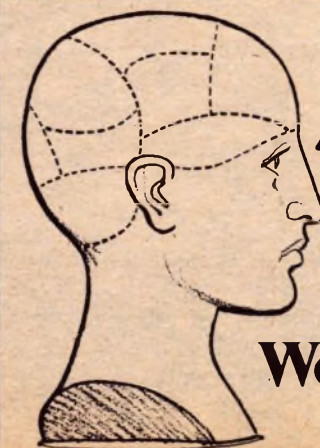
Yet being pressed together under extreme conditions, and forced not only to coexist but also to co-operate for common survival, we have seen with our own eyes and felt in our bones that whatever splits up mankind is artificial and can be tolerated or ignored whereas whatever unites mankind is real and profound, and is waiting to be utilized with the greatest benefit for whoever looks for it in an effort to build bridges between nations in areas where religio-political currents tend to drift nations apart.

We are proud of having had, with your kind

permission, the honor of sailing 5000 kilometers under the United Nations flag, and in rewarding multinational co-operation.

It is our hope to see a great increase in the number of private citizens that directly or indirectly attempt to make their governments realize that the United Nations flag, symbolizing the ideas of building bridges and tearing down barriers, marks the only realistic road forward for man in a space-age when our common world is getting ever smaller and the national arsenals ever larger.

Thor Heyerdahl, Norway
Santiago Genoves, Mexico
Norm Baker, U.S.A.
Yuri Senkevich, U.S.S.R.
Abdoulaye Djibrine, Chad
Georges Sourial, U.A.R.
Carlo Mauri, Italy



for the
**thinking
amateur**

Worldradio



Blood, Sweat and IRCs

by Clara Stables, WB4NXR

I don't believe it will go out of business; but the neighborhood branch post office is going to miss me. On the wall of my shack, in the place of honor, flanked by my WAS and my WAC, but totally eclipsing them, hangs my DXCC Certificate, resplendent behind polished glass and surrounded by an imitation gold frame. Had I the dollars spent on 21-cent air-mail stamps and 22-cent IRCs, the frame would be real gold, or at least gold leaf. But --no IRCs--no Certificate.

I didn't really start chasing DX seriously until about 15 months ago, at which time I had about eight countries confirmed, mostly on ten meters. I decided not to check into any Nets; for I believe with Kipling that "he travels fastest who travels alone." Twenty meters scared me. I would tune to it and shudder. Every CQ spilled over each other and operators tuned up with fine disregard for QSOs in progress. When a rare or semi-rare DX station came on, the pile-up resembled a clutch of XYLs at a grab sale. Half of them didn't know whom they were calling or where to point their beams. They just blasted away with their full gallons -- or better. With my weak signal and my low beam, I never stood a chance.

I sabotaged a Fin now and then from the house money until I had embezzled enough to buy a plug-in 1200 watt amplifier. My mast broke in a Force 4 wind (Beaufort Scale) and the West Palm Beach ARC boys installed a new one, raising the antenna height to 30 feet. Things began to change. I tuned up on 20 meters, swept the band until I found a pile-up and added my strident, cigarette-hoarsened voice to the multitude. Every so often, I'd get through.

Then began the trips to the post office. With exasperating slowness, the cards trickled back. To cards sent via the Bureau, I have YET to receive a single response. Perhaps, if I live long enough, they will all be mailed to me in the big, economy-sized envelope.

I tried calling "CQ DX" with little response except from our ubiquitous Latin-American neighbors requesting phone patches. What they did with all the IRCs and SAEs I mailed them, I'll never know.

I began to scan avidly the Contest Calendar

in QST and CQ. Contrary to the almost universal belief about YLs and XYLs, I don't like to rag-chew. That is one certificate for which I'll never apply. After I have finished with the physical description of my equipment and the weather, I can't think of much more to say. If the QSO drags on and on, I state breathlessly that I must hang out or gather in the wash.

In contests, all one has to give after the call are the signal reports, the state or section, and the contact number. I am a whiz at that--short, succinct--no fooling around with superfluous verbiage. Then I would mail the QSL cards, complete with IRCs and SAEs. The responses were no better or no worse than with regular QSOs.

One morning, I re-counted by cards and found that I had 103 countries confirmed. Everyone said that I should have a cushion of at least five cards. However, I decided to take a chance. They checked and after a little more than a week, I received the precious ARRL DXCC Certificate safely enclosed in a cardboard tube.

Incidentally, I have decided to give the post-man \$10 for Christmas this year. After all, he was the motorized Mercury--the messenger of the omnipotent Gods.

Darned if I know where my high school and college diplomas are; but I do know where my DXCC Certificate is. By dint of blood, sweat, IRCs, one B-WI note, and one dollar bill, I have won it. Now, I can relax and just make an occasional contact with a W1 or a K2 or even a KZ5.

But--QRX one! Isn't there some kind of certificate given for Work All Zones? I must look into this. It just might be worth a try.

(From "Florida Skip")

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TAD

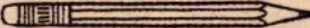
The Lockheed Amateur Radio Club (W6LS) is pleased to announce the availability of the TAD Award. This award is intended to be an added incentive to those who have not yet worked all states, such as American novices and DX Hams.

All correspondence should be sent to the Lockheed Amateur Radio Club, 2814 Empire Ave., Burbank, CA 91504, U. S. A.

Details:

1. The TAD Award is available to all American and DX licensed hams and ham clubs.
2. Confirmation cards must be submitted as proof of two-way contacts with each of the ten U. S. A. Amateur Radio call districts (1 through 0).
3. Each QSL must show bureau marking of postmark, or it must be accompanied by its original mailing envelope.

4. There is no minimum report requirement, but a report is required on each card.
5. All contacts must have been made from the same callsign area (PY2, K/W2, or LU9 as examples), but they do not have to have been made from the same location.
6. Contacts can be those worked to and from mobile, portable or fixed - portable stations, as well as fixed stations. Each contact counts for the call area in which the station was located during the QSO.
7. Cross-band and/or cross-mode contacts are also accepted.
8. Contacts do not have to be made after any specific beginning date nor before any closing date.
9. There are no stickers or endorsements for one-band, code, voice, RTTY, SSTV, QRP, or any other operating distinction. If interest warrants such stickers, they will be made available at some future time.
10. If your callsign changes, previous contacts do count as long as you made them from the same radio callsign area.
11. Application must be accompanied by one dollar to pay award costs and postage.
12. IRCs can be used to pay award costs.
13. Remember, Hawaii is in the Sixth U. S. A. Amateur Call District and Alaska is in the Seventh.

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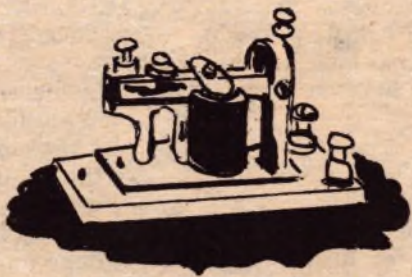
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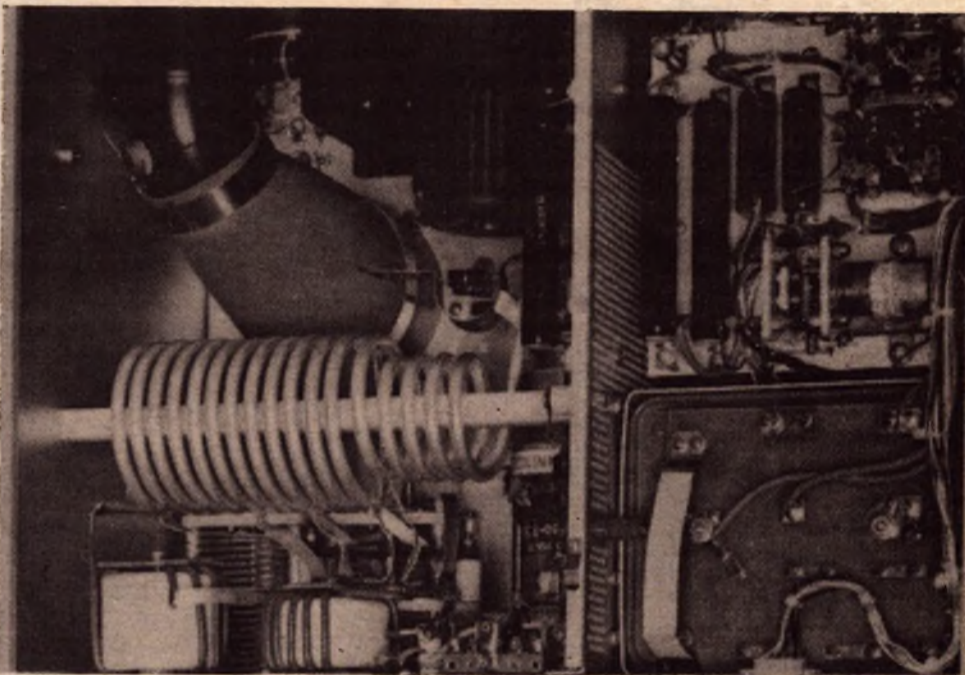
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"W7QGP calling. . ." from the ham radio equipment in her mini-motor home, Mary Smith Lewis communicated with another ham radio operator. The former Tri-Citizen now designs life saving electronics equipment for the University Hospital medical training center in Seattle.

by Beverly Jacobson

PASCO, Wash. -- W7QGP was in Kennewick a week ago and a lot of folks recognized her and stopped to say hello.

She is Mary Smith Lewis, daughter of Mrs. G. Alma Smith and the late Dan Smith, Kennewick pioneers.

While Kennewick people may know her best as "Mary Smith," there are many more around Washington State who recognize her as W7QGP, the first woman section communications manager in the state for the American Radio Relay League.

The tall, slender, immaculately groomed and poised Mrs. Lewis had been buzzing around the state in her red shag carpeted mini-motor home attending "ham fests" when she stopped in the Tri-Cities.

She was on a five-week "comp time" vacation from the University Hospital Medical Training Center, where she works designing instruments for cardiovascular technology, monitors these instruments during surgery, and trains physicians, dentists and nurses in their use.

A graduate of Kennewick High School in 1945, Mrs. Lewis has an electrical engineering degree from Washington State University and a general electronics degree from North Seattle Community College.

"It took me three years," said Mrs. Lewis,

Electronics is life for W7QGP and she uses it to save others

who earlier had admitted at times to putting in 15 and 18 hours a day at work in the hospital.

Her husband, W7JWJ--or Harry Lewis to non-hams--is chief engineer of the audio-visual system for the college.

"He's a very tough instructor. He knows the value of what's going on," said Mrs. Lewis.

"It was W7JWJ who turned Mary Lewis on to electronics.

Remembering her childhood in Kennewick, she said, "We had a little AC-DC radio which my father turned on and off and we weren't allowed to touch.

Back in 1948--while her husband was in charge of radio communications with the Atomic Energy Commission Air Patrol in Richland--Mrs. Lewis monitored their home radio equipment.

During the flood, she had to interrupt her monitoring to be transmitted by army truck to Our Lady of Lourdes Hospital in Pasco for the birth of the Lewises' first child--a daughter Dianna, who, at age ten, became known as K7ETY.

When the couple moved to Pullman, Mrs. Lewis studied for an electronics engineering degree and got her ham license in 1951.

"One of the fellas," recommended Mary Lewis for the job as head of the public address system for the WSU campus.

"Homer J. Dana (the man in charge of hiring) put me through a grilling--diagramming and everything else--while the boys who applied just got the job. I had to PROVE I could handle it!"

Mrs. Lewis describes her son Gary--known since age seven as WA7BBJ--as an electronic genius.

"He was the youngest licensed amateur in the U. S. when he got his ham ticket. He would have had it sooner, but we had to teach him algebra!"

She believes parents who have no electronics background but have children interested in the subject should introduce their youngsters to a ham radio club.

"Give them this experience--especially if

the child is handicapped or an invalid," urges Mrs. Lewis.

"Electronics is the best kind of experience --not only for children but for adults.

"Blindness, cerebral palsy, it's no excuse. These people make excellent hams," she said, adding that she knew of three young men confined to wheelchairs who were planning to take ham radio courses from the Tri-Cities (Richland) Amateur Radio Club.

Mrs. Lewis not only sees electronics as a means to the outside world for handicapped persons, but a way to sustain life.

"Last week there was a woman from the Valley (Grandview-Sunnyside area) who was attached to a kidney machine--she was given a kidney transplant. Now, she has a 60 per cent chance to lead a normal life.

"Don't bury kidneys. Transplant them!" Mrs. Lewis said, and she feels the same way about eyes and other organs.

Among the monitoring devices she has designed is an instrument which measures the continuous oxygen saturation of the blood.

"It measures the percentage of oxygen being pumped through the body to the various organs . . . from this percentage we can tell instantly how well or sick a person is. . ."

From her work at the hospital, Mrs. Lewis said, "We have proven some points of physiology to be wrong--but we have so much more to learn.

"Just look, a few years ago there weren't pace makers. . . now we can make graft heart repairs!"

And, as a passing thought, she said, "So for looks' sake, don't strip those varicose veins--you may someday need the upper vein for a heart repair."

What does such a vibrant, energetic woman do when she does find some quiet time?

"I've been cleaning house and canning."

"My mother taught me how to can when I was little and I stood up on a stool by the sink to help her peel fruit."

(From the Pasco, Wash., "Tri-City Herald")

Brevity

by Tom Kulas, WAØIAW

I have been operating quite a bit of SSB on the HF bands and FM on two meters lately, and have noticed something quite strange. AM has almost disappeared from the HF bands. As a matter of fact, AM has been gone for ten years.

Why is it, then, that the younger amateurs as well as the OTs, use the AM monologue on both SSB and FM?

The advent of the repeater has curtailed the FM type, as FCC requires a shutdown after three minutes of continuous operation. However, on simplex as well as the HF bands, the monologues can last six or seven minutes. Ask

a ham what he does on his radio and he will tell you that he talks with people all over the world. With the monologues that you hear, it sounds more like he talks AT them.

When you are hobnobbing with your cronies at the local soda parlor, you don't let Joe talk for five minutes on several subjects, then let Al talk for six minutes, and then let Alice (Women's Lib, remember) gas for ten minutes before it's your turn, do you? Why do it on the air?

With the advent of VOX or PTT on SSB and FM, why can't the conversations be just that--conversations?

Think about it--shouldn't the conversation you have with your ham buddies be the same type as the gossip sessions you have across the back fence with your neighbor?

(From the Minneapolis, Minn., "Splatter")



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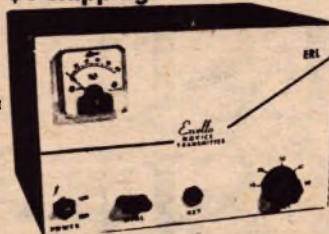
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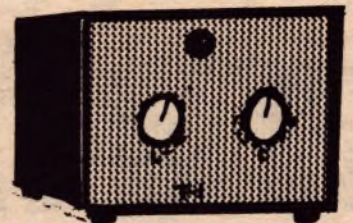
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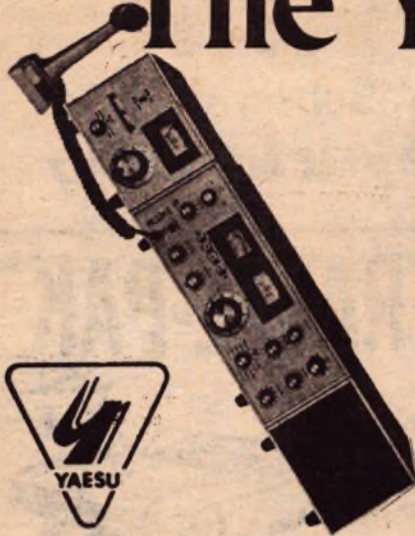
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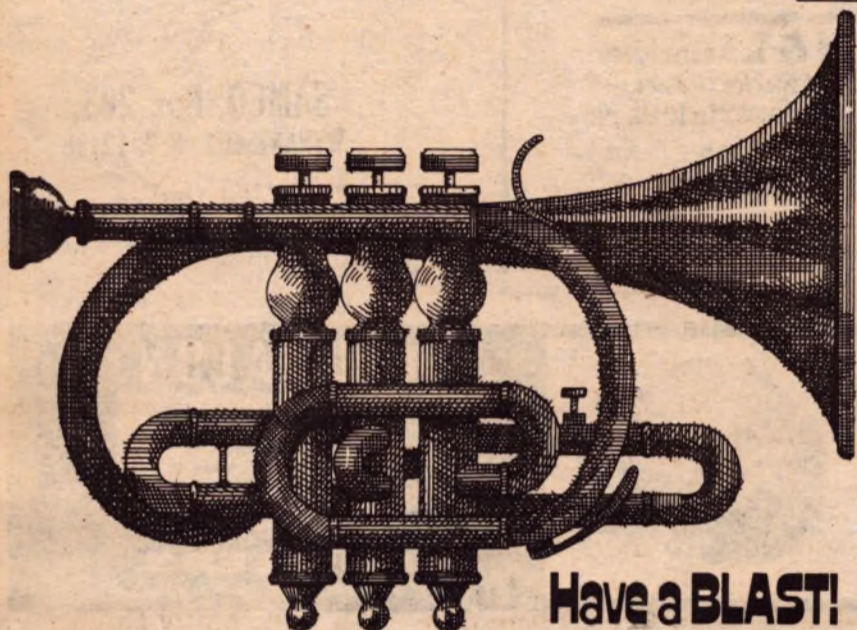
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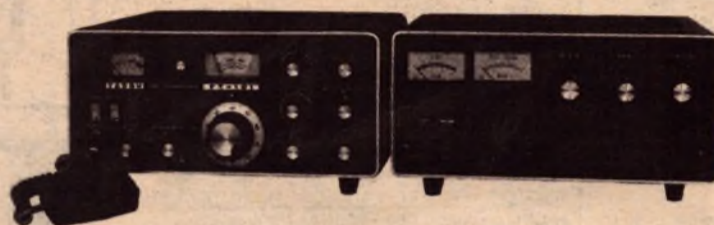


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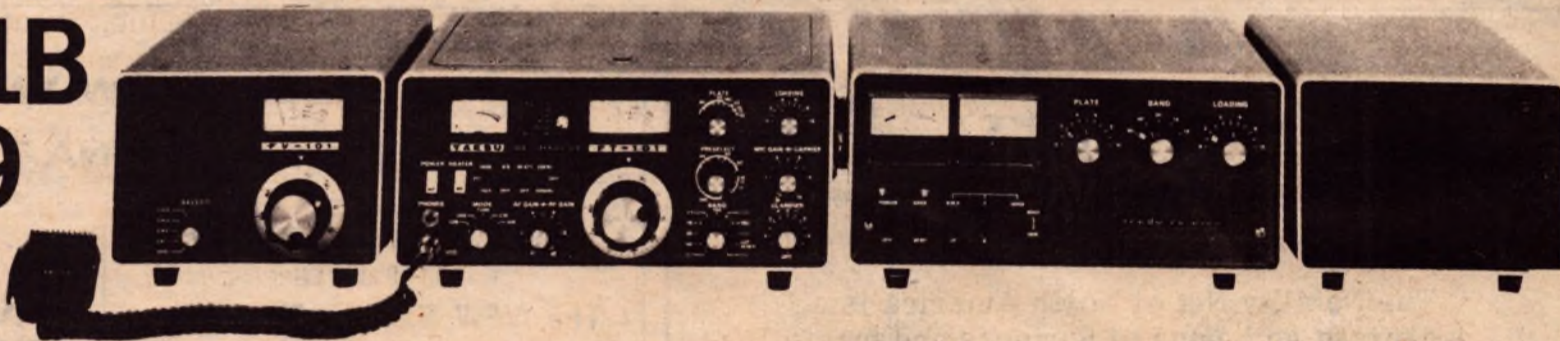
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Let us hope together that the holiday season theme of "Peace and Goodwill towards Men" becomes a reality. How wonderful it would be if the goodwill that exists between amateurs of different nations and political beliefs and religions would spread to all people.

Larry, K6RPH

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Back home...GI Bill...classes, work, not too much time for fun. Still not easy--but you made it.

Graduation...marriage...that first tiny apartment, that first second-hand--or much, much older--sedan, milestones along the way...up. A real grind...nothing came easy. Perhaps you started your own business...and your wife kept the books, after she came home from her own job...and made supper...and got the kids to bed.

Those were tough days...you were tough enough to meet them.

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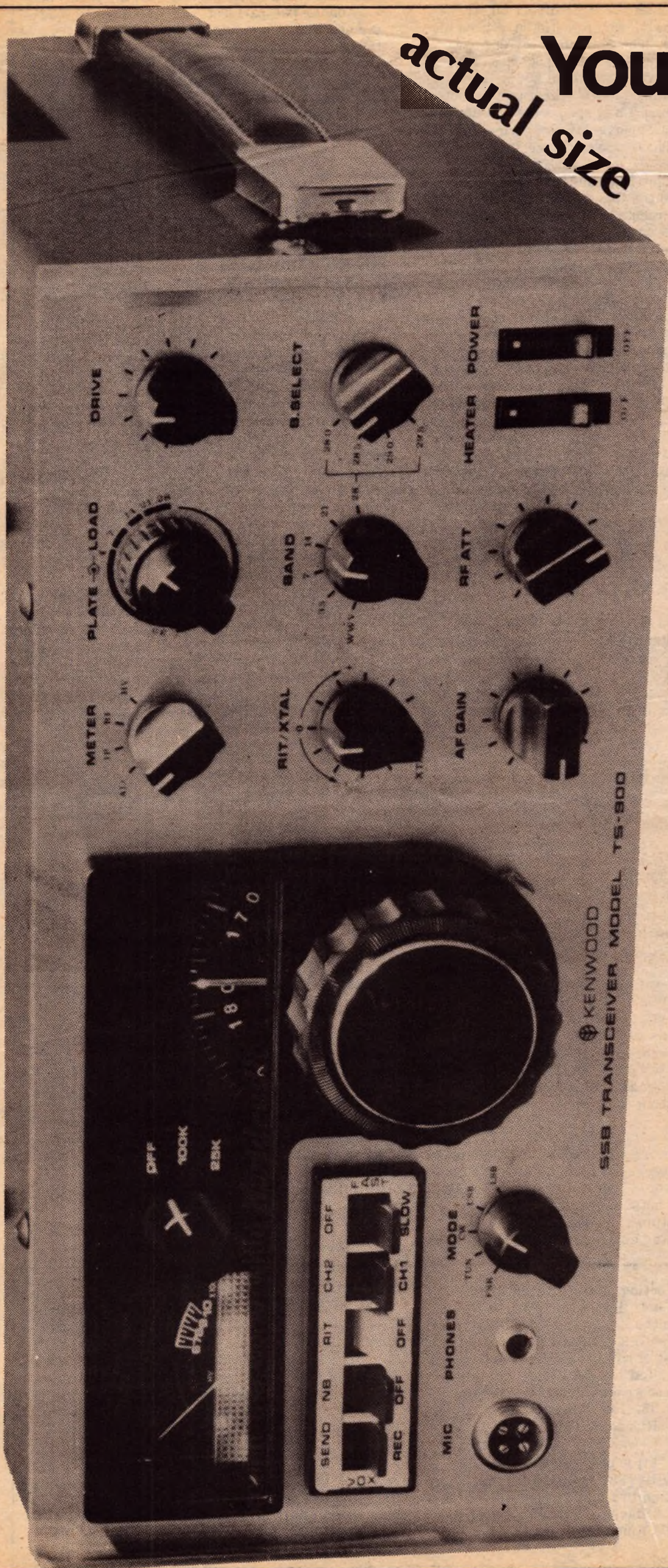
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Maritime Mobile

by
Bill Yost, WA6PIU



Introducing the monthly Maritime Mobile column, and its editor, Bill Yost, WA6PIU...

The seas were running perhaps a bit higher, with the wind a bit stronger. The sky had faded into a high overcast which bleached the blueness of the ocean, leaving an ominous gray.

We were 17 days out of Long Beach, Calif., on a 24-foot sailboat, bound for the Hawaiian Islands. For the past two weeks, we had enjoyed the experience of the open sea in spite of some basic rigging problems during the early part of the trip.

My two crew members, who just two weeks earlier had been considered novice sailors, were now thoroughly honed to the rigors of the sea. The boat was riding nicely in the large swells of the tradewinds, using a twinhead sail rig trimmed to provide self-steering.

Earlier in the day, we heard our first Hawaiian broadcast station, which lifted our spirits in confirming we were indeed on course. Our thoughts were then on green mountains, misting waterfalls, and--Oh, yes! Those little comforts we all take for granted--a cool drink and a leisurely meal. As we listened to the music of the local Hilo station, there was a sudden pause and then the announcer's voice broke the silence with a "Special News Bulletin: Hurricane Denise threatens Transpac. All available Coast Guard units have been dispatched to the area of the Trans-Pacific yacht race, where 50 sailboats in a biennial race from San Pedro to Honolulu are threatened by the worst tropical storm to approach the islands since 1910. An air force weather plane estimates wind speeds at more than 112 knots, with the cyclonic front moving north at a rate of 12 knots. Presently, the eye is centered 600 miles southeast of Honolulu. All residents are requested to take necessary precautions should the storm shift and sweep the islands. Please stand by for further developments..."

Aboard our 24-foot Tupperware universe, three heads had collided trying to get an ear nearer the speaker of the portable radio...

There must be a special mechanism in man's makeup which is activated only in times of extreme stress. While I'm at a loss to describe accurately the syndrome, at least I now have empathy for others who write on survival. Perhaps disbelief is first, and even as reality becomes apparent, realization of the severity of the storm remains beyond comprehension.

In this case, as reality worked its way into my mind there seemed to be a physical change; perhaps it was fear, yet I did not feel afraid--my body just felt numb, somehow relaxed all over. I noticed that my crew underwent a similar evolution... we just sat there without talking for what seemed an eternity.

Maybe it was the sudden rattling of the hatch by the wind that broke the spell. The men sprang into action like wild animals with fire in their eyes; their lethargy was transformed into intense mental and physical effort. The hurricane's position was rapidly calculated, plotted and tracked--with luck, it would pass us to the north. A life raft was partially inflated and filled with survival rations, ready in case the boat sank.

Each succeeding broadcast report gave the storm a new and unfavorable direction, the last being easterly, which would have it on us during the night. The only glimmer of hope was that the storm was subsiding, that wind velocity would drop to... would you believe a mild 80 knots? My thoughts went to the southern states, where I had seen steel bridges twisted by such storms--My God! What chance did a 24-foot plastic product have?

The time for my first and last QSO had arrived; I chose the Coast Guard frequency for other than sentimental reasons. My rig at that time was a Gibson Girl with a wire run bare-foot (literally) up a mast for an antenna; the rig's antenna is normally run up by a balloon or a kite, but this was extremely impractical at the moment. The Gibson Girl, for all you non-GI types, is a hand transmitter which sends automatic SOS sequences followed by a long modulated carrier. It also has a rubber button on the side for conveying such additional information as QTH, RST, an occasional HI, and one or two 88s. The rig has what might be called a rotary power supply, making the revolutions via a hand crank.

As the crew took turns cranking, I keyed the button, giving our longitude and latitude several times. We knew that due to a shipping strike there were no vessels in the area. We were hopeful, however, that some coastal station might pick up the traffic. This would give rescuers some idea of where to look for our craft when things blew over.

It happened during one of the SOSs--there was a Godawful sound above the howl of the wind--the mast had gone. On quick examination, we found it lying on the deck under a tangle of rigging. All sails had been down, but constant vibration had fatigued the backstay fitting.

The mast was quickly lashed to the deck just as it became dark. We settled below to rest as the seas rose outside our small and gyrating sanctuary. All we could do was wait--which is an agonizing experience. Radio broadcasts from the islands faded with the light, leaving only the moaning wind as an indication of our fate. The three of us sat silent around the partially inflated raft, which appeared as a big orange coffin in our thoughts. Occasionally the hatch would rattle as wind and water ripped its foundation.

At this point, the seas were really confused, tossing us on our side and back again. We had planned to ride downwind, dragging a jury rigged sea anchor to keep our stern into the wind. As the storm came through, however, the wind put us broadside to the swells, which would roll the boat almost 360 degrees. Again and again, the dark waters pressed against our cabin windows.

As exhaustion crept over me, I would doze off, only to be awakened by the violent jarring motion as we dropped off the crest of another wave. Finally I must have passed out from extreme exhaustion, for when I woke up, there was laughter coming from the cabin. My

head was in a pool of water, with my feet and body under two sail bags and some soggy magazines. The storm had dissipated during the night.

Why anyone would laugh at being dismasted 400 miles from the nearest port is beyond me, but we were glad to be alive, so we laughed and rejoiced as if we'd just been reborn. The often abused gift of life was back with us--along with a full awareness of its splendor.

In this happy atmosphere, we jury rigged the boom, hung up two job sails and were on our way at the amazing rate of 75 miles per day. The winds treated us so well that on the fourth day after the storm, as darkness fell, the loom of Hilo harbor was visible on the horizon.

The next morning we blinked with astonishment at a panorama of snow-capped (Yes, I said "snow.") peaks, gentle rolling green hills and the outline of Hilo, Hawaii. Two hours later, after coaxing the last snort out of the small outboard and its three-gallon gas supply, we were tied safely to the seawall, snug inside the harbor.

My first concern on arrival was to cancel the distress traffic--assuming it had been received...

And as I had suspected, no one heard the distress signal...

According to the Coast Guard officer-in-charge, only the larger commercial vessels monitor 500 kHz.

"Your best bet is ham radio," he said dryly. "With all those stations out there listening, you are bound to be heard. All our ocean stations are ham-equipped. Phone patches for the crew, security, a real service that ham radio..."

Well, he went on for about an hour on the virtues of ham radio, and I began to see what the service means to men isolated at sea.

We ended up having a great time in the islands. Unfortunately, my vacation time ran out, and three weeks later I was back with the Fish and Game Dept. in Long Beach. There a new boat gave me the incentive to obtain a ham ticket within a few months. When I served as a marine biologist aboard the research vessel "Alaska," maritime mobile became a way of life. Today, though still a sailboat skipper and active in maritime mobile, I'm doing salmon research along the north coast of California.

As your Maritime Mobile Editor, I want to encourage all the "salty dogs" of Amateur Radio to send in their ham-related sea stories. We hope our monthly column will offer a variety of mobile themes.

Until later, 73 from the Regions...

Bill Yost, WA6PIU/R2

DXers: for cementing better international friendships and excellent (about 95%) QSL-return, write in the language of the DX station worked. How? With K3CHP's DX QSL GUIDE. It contains a list of numbered radio-amateur sentences translated into 54 languages! Simply select and copy sentences in the language of your choice. \$3.95. Joe Mikuckis, 6913 Furman Pkwy., Riverdale, Md. 20840

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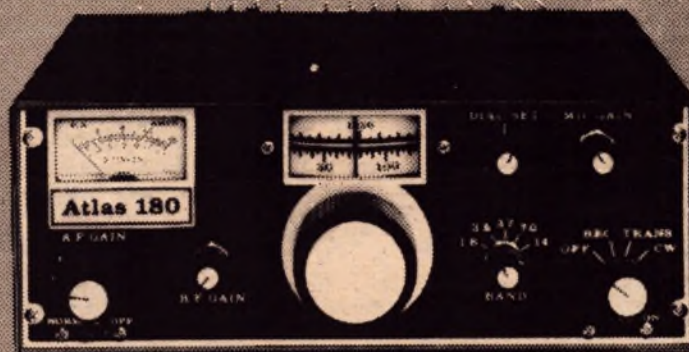
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73 Herb Johnson W6QK1



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There are no dues and the nominal membership fee is perpetual. You are invited to write for information.



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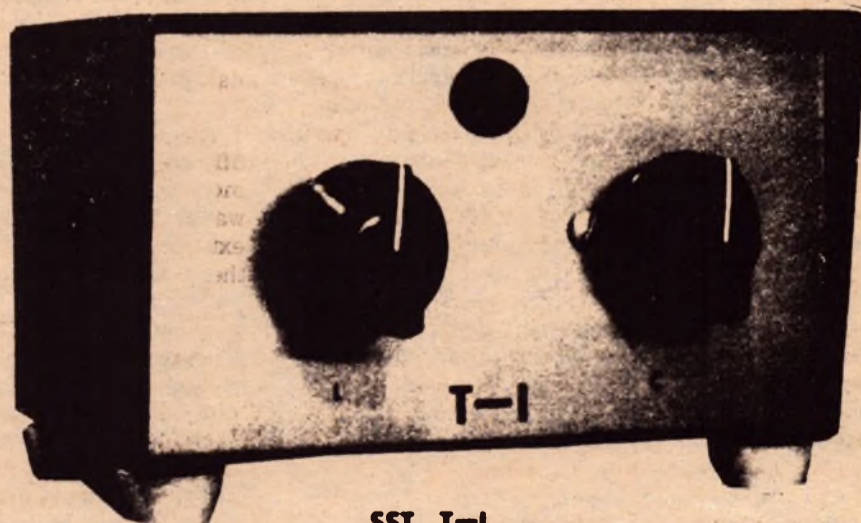
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Our Hobby *a new direction?*

Mindless diversion or-meaningful activity?

by Armond Noble, WB6AUH

Publisher, *Worldradio*

Delivered as keynote banquet address at the Fresno, California, Amateur Radio Convention.

(Continued from last month's issue.)

We recently received a letter from a ham who said he would not subscribe to *Worldradio* because there was not enough "tech data." He then said he "was NOT interested in saving lives."

That fellow has problems...

When I was a young lad, I had the opportunity of going through a fascinating collection of QSTs of the 1930s. The pictures of hams operating from exotic spots in the South Pacific were appealing, but one scene really stood out. I can still see it in my mind's eye--a night photo of a ham in a rowboat with a huge battery-powered radio, during the Johnstown flood.

I was impressed, quite young, with the fact that Amateur Radio can do something for other people.

What's on the horizon?

Slow Scan TV promises to be a great thing... if we use it right. If we can see the fellow in another country, his wife, his children, his house, his street, it will be a private "window on the world." The potential is staggering... for those who can unshackle their minds.

These are the hams who find the picture or the information more important than the mere fact of being able to send and receive pictures and information.

We've got to lose the "Hey, Mom, look at this!" approach to radio!

This was brought home to me a few years ago. Some of you may have heard of Fred Hargesheimer (WØEBG). Fred was a P-38 pilot shot down during World War II over New Guinea. For 30 days, he wandered alone in the jungle before being found by some natives.

For the next eight months, the natives hid him from the enemy. Soldiers searching for downed American fliers used the natives for bayonet practice in an effort to get them to tell where Fred was--but they never told.

In 1960, Fred went back to visit those people, and a year later he helped them build their first, their very first, school.

A few years ago, Fred went back to visit, and I went with him to shoot a film. We took along a Swan Cygnet, and Fred would get on the air and talk--that is TALK--to his many friends--FRIENDS--all over the world.

I wanted to make "contacts." Hams were saying, "Thanks for the first VK9... This makes 100 countries... Never heard a VK9 before... I've got 200 countries and never worked a VK9..." and so on. One night I was pushing that mike button and the pen as fast as I could--really in hog heaven. Fred walked by and said, "What are you doing, proving the laws of radio work?"

How many hams today can remember the days before a radio signal first crossed an

ocean to be heard by someone on the other side? The sheer novelty should have worn off by now... and we can get down to meaning.

On one night I recall, an American missionary in New Guinea was in QSO with a U.S. station. The QSO was a true conversation, talking about the children, the climate, asking and answering questions...

Then a W3 broke in; the VK9 acknowledged him--possibly the breaker would join in the conversation.

No, he asked the missionary to give him a report, with and without speech compressor. The answer came back, "Three db stronger with the compressor." The W3 then said "Thanks," and left the frequency.

The W3 had made contact with an area that many call "the land time forgot." On the map, the huge island even looks like a dinosaur. His voice had gone halfway around the world... to what purpose?

One 20-meter contact we monitored was between a W2 and a station in Le Mans, France. It was another one of those "My name is Joe... you are five-by-nine... my rig is such and such," and then the W2 went into this long, long signoff. I've heard him several times--he must read his prepared signoff from a card, "I would like to thank you for the opportunity of visiting with you; I wish you and your family the very best..." and more of the same.

What "visit"? The signoff lasted longer than the conversation. The W3 had worked a ham located at the site of one of the world's most famous annual auto races. Did he ask about the race? Or anything? NO!

Wouldn't it have excited the person--not a "rig" but a fellow human being--on the other end if the slightest interest had been shown in his home area?

It just might have disproved, at least for that ham in Le Mans, the widely-held opinion that we Americans, with all our money, our opportunities for education and for travel, are still the most insular people on this planet.

Is ham radio nothing more than a mindless diversion? Can it be a meaningful activity?

In a Sacramento ham shop recently, a couple of guys were saying they'd really like to go on a DXpedition somewhere. I brought up an idea that was discussed in recent issues of both *Worldradio/NEWS* and QST...

An American ham now living in Columbia, Larry Lazaar (WA2AAD), who went through the earthquake in Peru a couple of years ago, has for some time been trying to get together a group of hams who would have radio and personal gear ready and packed. In case of a massive disaster, the team would go to the area--it might have been the Nicaraguan earthquake or the Rapid City flood--and assist with communications... helping people.

If you are looking for satisfaction, for some real meaning, what could be more satisfying, more really meaningful, than coming back from such a trip? You would have the knowledge that you had helped people, directly saved lives, as Larry has done.

Or would you rather take your satisfaction from knowing that for three days you had sat on Bat Guano Island, giving out five-by-nines in one of the more pointless pursuits known to man?

DXers are quite willing to send \$5 or \$25, and often more, to help support these DXpeditions... so they can get a card signifying con-

tact with some "rare" spot.

Do you ever wonder what makes these places rare? It's lack of population--it's because nobody in their right mind wants to live on Arm-pit Island, or where ever.

But for some reason, some hams see DX-peditioning as somehow romantic... and the emergency team idea was met with, "I don't want to see my hobby used as a rescue service!"

His hobby...

I was stunned by his callousness.

When I recovered, I told him, "If you ever need to be rescued, you won't care how it's handled, ham radio or CB or underground, or whether the rig is AM, FM, PM, SSB, CW, spark or whatever..."

Perhaps every FCC-issued amateur license should come with a kit. In the kit is some malaria, a little amoebic dysentery, and a few disaster situations--an airplane ride when the wheels won't come down for landing, or with a fire on board, maybe an hour or so--as we had in Sacramento recently, but for a lot longer than an hour--near a burning ammunition train with the bombs exploding. You can get a lot of thinking done in situations like that, even in just an hour... it would be a very long hour...

A kit like that just might do something for those of us whose greatest hardship is driving the freeway back and forth to the button factory. We might get some idea of what's going on out there in the world.

There are real people out there, people that DXer didn't want rescued with his precious bands. They are people just like you; their lives, their families as just as precious to them as yours are to you.

Overall, hams performed brilliantly during the Nicaraguan emergency. It was a magnificent chapter in Amateur Radio humanitarian action.

But... there was one aspect that was a little disturbing. So that it can't be pinned down, let's say there was a station in San Francisco that had some traffic for Glendale, and got on a net to move it. But there was no station in Glendale, so for some 45 minutes there was a periodic call for a station in Glendale.

A telephone call from San Francisco to Glendale costs just 80 cents... and suppose you were not the ham but the person whose loved one--mother, father, wife, child--is down there. The news media tell you of thousands of deaths and injuries--maybe it's YOU who are waiting, in anguish, for news...

And a ham telephones to tell YOU your loved ones are safe.

Are we not willing to spend 80 cents--or however much it may take--to relieve that anguish of a fellow human being?

What is 80 cents, or even a lot more, in a situation like that? Think of all the candy bars or beers or peanuts we have stuffed into our faces... are we reluctant to part with 80 cents to do something real? We'll spend money to put cholesterol into our bloodstreams, to put inches on our waists, to destroy our brain-cells... but won't part with 80 cents to call Glendale...

Thank God, many hams did worry more about getting through to Glendale than about the pittance it would cost... even when the cost was a lot more than 80 cents.

(To be continued next month.)

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T-200	\$2.50	\$2.75	\$3.00	\$3.50			2.000
T-130	1.50	1.75	2.00	2.50			1.300
T-106	.95	1.00	1.00	1.50			1.060
T-94	.70	.75	.75	.95			.942
T-80	.55	.60	.60	.80	.90		.795
T-68	.45	.50	.50	.65	.75		.690
T-50	.40	.45	.45	.50	.60	.65	.500
T-37	.30	.40	.40	.45	.45	.55	.370
T-25	.25	.30	.30	.35	.40	.45	.255
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RACES

SUMMARY

System Development Corp., under the terms of Defense Civil Preparedness Agency (DCPA) Contract No. DAHC20-72-C-0243, undertook to perform a management study of the emergency role of Amateur Radio in civil defense emergencies. Included in the work statement for the study was (1) performance of an assessment of the operations of the Radio Amateur Civil Emergency Service (RACES) program, which is administered at the federal level by DCPA; (2) evaluation of the need for an expanded RACES potentially including all amateur-band frequencies in civil defense emergencies; (3) determination of the civil defense-military support role for radio amateurs; and (4) development of recommendations for strengthening the role of amateur radio in civil defense emergencies. This effort has been completed and SDC's findings and recommendations are incorporated in this report. For purposes of the study, we defined civil defense emergencies to include not only war-caused emergencies, but also natural disasters and non-war, man-caused emergencies.

BACKGROUND AND CURRENT STATUS OF RACES

The Radio Amateur Civil Emergency Service was established by the Federal Civil Defense Administration (FCDA) in 1951 to provide an emergency communications capability designed for use by civil defense agencies at all levels of government--federal, regional, state, and local. Following its creation, RACES was supported by a small organization at federal levels as well as by a multiplicity of state and local organizations. RACES developed through the 1950s and then began to decline. Federal leadership of RACES ceased to function in the early 1960s, and many of the state and local RACES organizations, lacking overall direction, gradually lost their effectiveness. While there are many exemplary RACES units at state and local levels, RACES is, at present, unable to function effectively and reliably as a system in response to civil defense emergencies.

At the time of its inception, RACES was thought of primarily as providing radio communications channels for use in war-caused national emergencies. While applications of RACES have been broadened over the last two decades to include natural disasters and non-war, man-caused disasters, RACES remains the only amateur radio service authorized to provide communications to civil defense organizations during such a war-caused national emergency. As dedicated public safety and civil defense communications have become available, reliance on RACES has diminished. This is perhaps

most noticeable at the federal level, where national teletypewriter and radio networks have eliminated the need for RACES channels connecting federal, regional and state headquarters. Although DCPA regions have equipment capable of operating in state networks, plans for operating in these networks have been abandoned. At other levels, RACES has tended more toward low-level backup functions in recent years.

Regulation of the communications aspects of RACES is the responsibility of the Federal Communications Commission (FCC). RACES is a component of the Amateur Radio Service, and not a full-fledged radio service. As such it is governed by the FCC's Rules and Regulations, Part 97 ("Amateur Radio Service"), Subpart F ("Radio Amateur Civil Emergency Services"). Because of its inclusion within the Amateur Radio Service, RACES resembles Amateur Radio in most respects, but has some unique, and sometimes arbitrary, features. The regulations governing RACES require that all radio networks within the service be organized by and operated under the direction of the civil defense agency in the area concerned. Each network includes all licensed Amateur Radio stations included in the civil defense communications plan for the area. There may be several RACES networks in an area, but they must be designed to share available radio frequencies, which consist of only a small portion of the spectrum allocated to the Amateur Radio Service. All civil defense communications plans which use RACES must be approved by the responsible state and federal civil defense authorities before the participating amateur stations can be authorized to operate in RACES. While RACES is part of the Amateur Radio Service and uses licensed amateur stations, allowance is made for the use of certain classes of commercial operators.

Each RACES network must be under the supervision of a civil defense radio officer, who must either hold (1) a valid FCC first or second class commercial radio operator's license, or (2) a valid FCC amateur operator's license other than one in the technician or novice classes. The civil defense radio officer must also have been determined to be loyal to the United States and adequately qualified, both in technical and administrative skills, to perform his duties. The criteria for these determinations are not specified.

Each station operating in RACES must be specifically authorized to do so. While both amateurs and non amateurs may serve in RACES, a station authorization is issued only to a person who holds (1) a valid FCC Amateur Radio operator's license, other than technician or novice class, and (2) an appropriate

Amateur Band	Amateur Bandwidth	RACES Bandwidth
160 Meter	200 kHz	50 kHz
80 Meter	500 kHz	66 kHz
40 Meter	300 kHz	38 kHz
15 Meter	450 kHz	6 kHz
10 Meter	1.7 MHz	0.4 MHz
6 Meter	4.0 MHz	0.8 MHz
2 Meter	4.0 MHz	1.08 MHz
1 1/4 Meter	5.0 MHz	5.0 MHz
420-450 MHz	30.0 MHz	None
Seven bands above 1215 MHz	More than 2260 MHz	None

Amateur Radio station license. Only one application has to be filed for any amateur station, including all transmitting equipment under the control of the licensee of that station, even though individual units of the station are intended to be operated independently at different locations, or as portable or mobile stations without fixed locations. No distinction is made between the equipment owned by the amateur station licensee and the equipment under his technical control during RACES operations. When RACES networks are activated, only authorized communications are permitted; in a war time emergency all non-RACES stations must cease operation. When RACES operations are terminated, non-amateur RACES personnel are prohibited from further operations. The FCC has the right to cancel any RACES station authorization when, in the judgment of the commission, the security of the United States would be protected or the performance of RACES would be improved.

RACES is assigned only a limited portion of the spectrum allocated to the Radio Amateur Service. Table I-1 compares the spectrum available to the Amateur Radio Service and RACES. In all cases except the 1 1/4-meter band, RACES has received less than 30 per cent of available bandwidth. In the 80-meter and 40-meter bands, which are critical for long-haul communications, RACES has been allocated only 13 per cent of available bandwidth. Allocation of the entire 1 1/4-meter band to RACES has not been helpful even at the local level, since negligible amateur equipment is available for this band. Those channels not allocated to RACES have been reserved by the Department of Defense for use in the event of a war-caused national emergency. The Department of Defense, however, has no significant plans for using these frequencies currently, since review of frequency management plans indicates that the vast majority of amateur channels are held on general reservations (denoting no specific plans) and only a few channels are held in specific reservations (indicating specific plans for their use).

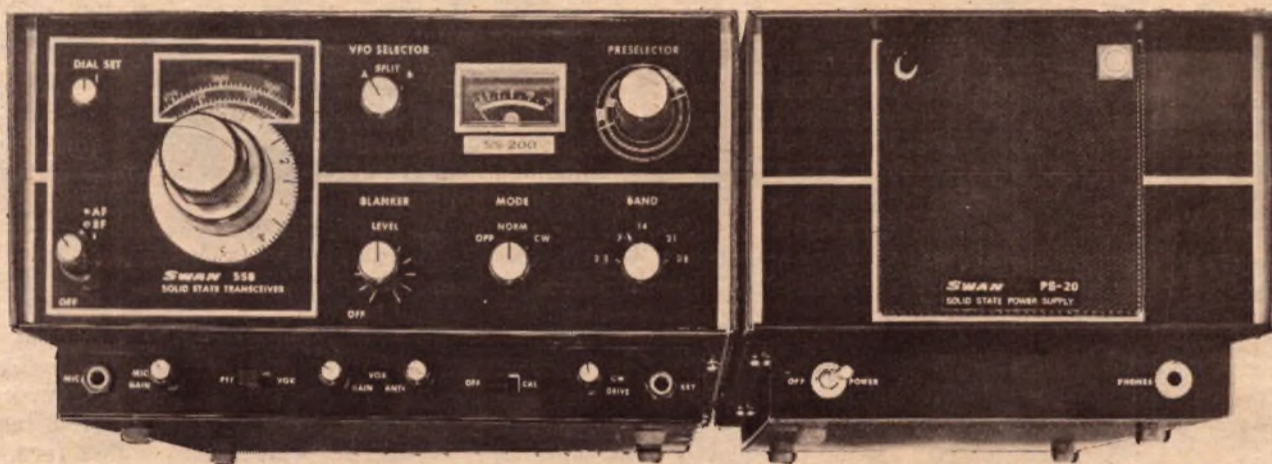
To obtain information on the current status of RACES and suggestions about needed revisions to the program, we submitted questionnaires requesting the desired information to all 50 state civil defense organizations and to 161 local civil defense agencies. Our survey was responded to by 46 states and by 88 local civil defense agencies.

Based upon our survey, we believe that RACES is, in general, accepted by state civil defense agencies. Of the 46 states for which we have responses, 31 reported that RACES was useful to them. Of this number, approximately half reported simply that RACES provided them with emergency communications, primarily for backup purposes. Of the remainder, most, while recognizing the value of the emergency communications channels, also reported that the RACES volunteer operators, their technical skills, and their equipment were additional resources of value. The remaining 15 states expressed more or less negative attitudes toward RACES: 11 appeared to feel strongly that RACES, at least as presently structured, is of no value to them; two felt that RACES is of little value in a protracted emergency because of the necessity to rely on volunteers, who have their own jobs and families to provide for; and two reported some need for the RACES frequencies, but only in the hands of paid state personnel. Interestingly, of the 15 states expressing a negative attitude toward RACES, only three reported any recent use of the service. (The two states reporting use of RACES frequencies by paid personnel did not comment on their recent disaster experience.) Since only two states registering approval of RACES reported no recent use of RACES, it appears that the negative attitude has caused the disuse of the system. Incidentally, the opportunity to use RACES existed in at least 14 of the 15 states reporting negative attitudes toward the service; only one of the 15 states was not declared a major disaster area at least once during the period 1961-1970, while the other 14 were declared major disaster areas from two to seven times during that period and still found no opportunity to use RACES.

Local government acceptance of RACES is difficult to evaluate. Almost all jurisdictions that responded to our questionnaires and had operational RACES units found it a useful resource. A few emphasized the limitations currently imposed upon RACES. Those jurisdictions that responded and indicated that they did not have RACES units, were often vehement in their criticisms. These negative responses and the extent to which local RACES units are nonexistent throughout many states lead us to believe that, overall, RACES is not well accepted by local governments.

(To be continued in our next issue.)

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A Man For Others

The Story Of Ned Carman, WØZSW

by Sister Alverna, WAØSGJ

Handi-Hams, Arm of MiSCCA

More interest, more students, more needs. A white elephant sale was swinging when Casey Schmidt of Rochester loaned his vacant store. The July 1968 FLYER announced: "... we are engaged now in 'Operation Bootstrap'. We opened at Schmidt Printing's former location across from King Leo's Drive-In on Friday, June 28th, as a receiving station for white elephants... and we will be open every evening through July 8th, finishing off with an auction on Tuesday, July 9. King Leo will contribute half of their proceeds on that day to the Handi-Ham System. Urge your friends to drive in at King Leo's... and bring your white elephants!"

Kind folks did sort out usable items and merchants sent odd lot merchandise. Sister Mary, WAØJIE, a Little Falls Franciscan (at one time the only nun ham in Minnesota) came to help with the sale and, loudly lamenting her lack of elephant stock, handed the treasury a gift of \$300 received from an anonymous New Orleans amateur. "With friends like that," gloated Ned, "who cares if we aren't everybody's cup of tea!"

The August FLYER carried an exuberant white elephant story, with thanks to the helpers far and wide for their donations of time, talents, goods, and cash. Hard work and a good cause add up to real power, much of it generated by the Handi-Hams themselves.

Nine hundred dollars was cleared from this venture, which was turned over to MiSCCA... a powerful partner which then supplied on a loan basis \$1800 worth of equipment. Dick Lindquist, the manager of Radio Shack in Minneapolis, supplied the equipment at cost and kept up the guarantee on the receivers. (Another of those friends!) The receivers were soon out and a waiting list formed again.

He Can Do It

Typical of the background of a Handi-Ham is LeRoy Youngs, WAØYVT: "Ned stopped one afternoon in 1968 after hearing from Jim Mowery, KØZWG in Tracy, and asked if I would be interested in becoming an amateur radio operator, telling of his willingness to help. Ned must have seen the excitement I felt, because he said 'He can do it' to my mother. From that day on my life has been changed for the better.

"I will never forget the day Ned

gave me my CW test. I was sitting at my table listening to that receiver expecting no one to visit because our half-mile long driveway was blocked to the very end with snow. Suddenly a knock came at the door. It was Ned and he had walked up our driveway in a cold breeze to give me that test. It was pretty obvious from that day on that he really cared about me. He had to, to do that.

"When my Novice license came Ned brought up a rig and put up the dipole antenna from the barn to the house to the tree. He spent the afternoon here setting up everything and showing me how to operate it.

"Some time later Ned brought an electric typewriter and a tape recorder to help me with working on the Handi-Ham System Appreciation Committee. Then came the day for my Conditional license test and he gave it to me. It seemed Ned was always helping me in one way or another.

"The last time Ned was here was in December, 1971. I was fortunate to get a picture of him sitting in a chair beside me. As he was driving up our driveway he told me over his mobile that he had looked forward to the day he could do that (work me mobile as he drove up our driveway.) I knew he meant it.

"If it were not for Ned, I doubt I would ever have been an amateur radio operator. I am so grateful, and so is my mother, for what Ned has done for me in making my life much more enjoyable. Only a person who for so long found so many things that were impossible to do could understand what amateur radio means to me and other handicapped people Ned has helped. I hope Ned knew and knows now how grateful I am to him and how much he was loved by all of us."

It is a Privilege to Serve

Early in 1968 Ned was contacting regularly about 15 handicapped persons, sending them books, making them tapes, calling on them and letting them talk over his Drake TR4 that he had set up temporarily. Ned believed in measuring abilities rather than disabilities, although he was sensitive and thoughtful in supplying for the latter. His car was at the service of many and all, and we used to tell him it wouldn't run properly without crutches or wheelchairs in it. He knew what cab fares could do to a budget, and stretched his days when a Handi-Ham was in



town, glorying in the chattering and badgering as they drove along, once exclaiming, "Does anyone have as much fun as we do?"

When seven handicapped gentlemen signed into a local motel for a hamfest, Ned signed in too so that he could anticipate all their personal needs. We have reasons to believe a good time was had by all. We wonder: Was that the hamfest Ned was presented with a gas can to remind him of a sudden stop one summer day on a remote North Dakota road?

Each Handi-Ham was a personal friend of Ned... this took precedence over the handicap or the operation of amateur radio. Duane Hukriede of Kenyon writes: "While Ned was putting up my receiver I told him of the three programs I was giving at the rest homes in Fairbault. Showing up at one of those programs was another sign of his interest in me. He heard me sing and that is why I happened to be the one asked to sing just before the hamfest dinner... I am proud to have had Ned as a friend not only because of what he did for me, but also because of his jovial manner, which instilled confidence in me which I never had before."

The FLYER Grows

When Father Tom Ploof, KØSAZ, was transferred from Rochester, Ned fell heir to the editorship of the FLYER, a job he found highly enjoyable. At times it was challenging to be fair in emphasis to the three groups sharing the FLYER-Rochester Amateur Radio Club, PICONET, and the Handi-Ham System. Only a ham with strong ties to all three groups could manage. The increased size, new format, and enlarged cir-

ulation required clever and willing hands and these were to be had at Assisi Heights. Actually, no one worked as hard as Ned, but after each issue was mailed, he thanked every helper as if he or she had done it single-handed. Dorothy Suddendorf, Scott's XYL, proved a gift from heaven when she took over cutting the stencils. Don David Taylor, WAØYAH, designed exquisite covers. Sisters Alverna, WAØSGJ, and Berard, WAØWVR, put in deft touches and sketches and mastheads. Each month tapes were made so that blind hams could share the FLYER.

An issue in '69 had an item Ned slipped in (by filling in the bottom of a stencil): We believe you have suspected the truth for some time so this admission will not come as a shock. The real editors of the FLYER are Sisters Alverna and Berard. If you don't believe it, just try to slip in some toe-trampling item. All spoofing aside, we are grateful to these two young ladies for their work each month from the necessary prodding of our contributors to the art work and complete assembly of 500 copies."

Orlin Greening, WBØAPA, a FLYER crew member recalls two supplications frequently made by Ned, one to his fellow man, one to his Creator: "But I want to help you!" and "Lord, help me get two days' work done today!"

FLYER Bits... Off Ned's Typewriter and the Top of His Head

March '69: The HHS on 3934 kc at 1:30 until 3:00 p.m. on Saturdays. We are there to make the HHS more fun for all... and provide a measure of participation for our students at home... so be sure to check in if you are a Handi-Ham... or listen in if you are a HH student.

*Mary Amdahl says 'The most handsome man from MiSCCA called on me... exchanged receivers (DX-150) with me... and took the ailing receiver to Minneapolis with him for repair.' That man was our good friend, congenial Joe Klawitter, Field Supervisor at MiSCCA... thank you, Joe... and isn't Mary a lovely gal?

April '70: What a pleasant short visit with that fun-loving independent gal, Mary Keener, WAØDAG. Mary has her Advanced license and is immersed in a correspondence course with DeVry Institute for a First-Class Commercial Ticket and is most busy assembling an os-

cilloscope kit-complete with braille instructions. She talked with enthusiasm of Carl Owens, a student at the Iowa Braille School. There is an old-time ham near Carl. George Elmore, WØBTY. It looks as if he and their Amateur Radio Club's president, Bud Southard, will be helping Carl.

May '69: Helen Haynes passed her novice theory test with a score of 100. Wonderful! First to do this was Helen Swanson. This old Ham, your Editor that is, had to try 3 times some 30-odd years ago.

October '70: Dick Eichhorn in Minneapolis is WNØCPC. Dick is visually handicapped and had such determination that he started out listening to his own Drake TR4.

June '69: Quoting a note from Helene: "It's a real pleasure to hear WAØVTZ, Alta, on the net. She's always there, and we've tried to get a steady outlet into Rochester for so long. Welcome aboard, Alta. And, fellas, doesn't she have a yummy voice?" Our sentiments exactly, Helene. Tnx!

October '71: From Jerry Elfstrand, WNØFMI, of Annandale: "You probably know that I use a mouth stick to type and send code. It is difficult to send code at much more than 5 w. p. m. with this stick. So I am determined to get on phone which should be more practical in my case. Meanwhile, I will continue to use cw because it is fun to make contacts, and I enjoy being on the air." More power to you, Jerry, your enthusiasm is really great.

May '72: Well, well, well, well! Good guy type Irish went along to the FCC to encourage Helen Haynes in her fight for General. We conned him to try.. and now HE'S A GENERAL.

January '70: Handi-Ham Donors. You're a great bunch. . we need, love, honor and obey you, but it does hurt when you insist on anonymity. But not even Ward can stop us from sending him and XYL, Elma, our thanks for their recent financial Christmas present to the Handi-Hams...and our dear friend, Charley Gilmer, W5JVG, down in Beaumont, Texas, and his XYL. their welcome check tucked in with their greetings.

June '70: Helene Torbenson has put in literally hundreds of hours writing letters and carrying on her area coordinator work with students.

Treasurer Cecil Davis, WØAZR, has worked very hard keeping our books in order; he and his XYL also gave two weekends helping to ready up the new HH station at Camp Courage.

Jan. '71: What a grand time we had at the Winter Hamfest in Fairbault. . and thanks. . most of all to the Ladies of the Eagles Auxiliary who put on that wonderful dinner at cost, all work donated. THERE is a public-spirited ladies organization!

Feb. '71: Janice Robidoux has spent many hours compiling a beautiful new brochure on the HHS and it has just gone to press.

June '71: After May convocation: Let us not forget the helpers who came and worked like troopers supplying necessary physical care and spreading sunshine, even during Sunday's rain. . . we had been successful in coaxing WAØUWT (Handi-Ham Sister Alena) to come to camp for the first time.

Jan. '72: Following a 10-week crash course in Ham Radio at the LaCrescent High School, Joe She-

pardson passed his conditional with flying colors. He is now WBØCSU.

September 1970: Mary Adams 1937 - 1970

Polio struck Mary at the end of her Junior year in high school. . . Mary had many hobbycraft interests, went to Camp Courage every year, and typed stencils for her church paper, the First Baptist Church of Lake Crystal. You may like to know how Mary managed to type -- with a cloth wrapped about the left wrist, she would lean over and clutch the cloth in her teeth and move her arm around the typewriter keyboard. And this was a sincere, cheerful girl with a genuine smile as her most striking characteristic. . . Mary started with the Handi-Hams about two and a half years ago when Rev. Ralph Milford, WA9ZWI, was her pastor. He built and installed 80 and 40 meter antennas and the Handi-Ham System loaned a receiver and later a transmitter. (Bill Owens, WAØTUU, being a great help to her.) Eventually she was using a Heath DX60 Transmitter, one of many donated to the system by Stan Burghardt of Watertown, South Dakota. . . It is most heartening to know that Mary enjoyed her years in amateur radio so much.

December 1970: Doug Peterson 1944 - 1970

Your editor met Doug for the first time in July, 1967, when a group of us early stage Handi-Hammers put on a ham radio demonstration at Camp Courage. Ron, the Camp Director, had warned us that only a few campers might attend. . but Don Johnson and Eddy Thorson were camping then. . and promoted. . and the reception center was thronged with thrilled participants, Doug among them. He went home and by the following year, with the help of Leland Olson, WØZOB, of Litchfield, had acquired his novice ticket, and was this summer working for the General.

The Circle Grows

Oblivious of mileage, if a trip gave benefit or pleasure, Ned took his Ham friends to visit one another, to see radio demonstrations, to Camp Courage, to meetings. Perhaps a dozen or more were taken by Ned himself for the FCC examinations. Some had to repeat, and Ned's answer was almost predictable: "That's O. K. . . we'll study harder and come back next month."

Let us realize an invaluable help Ned had in understanding the handicapped -- his XYL, Erdene, now a nurse in therapeutic radiology at the Mayo Clinic. Erdene understands long-term illnesses and residual disabilities as few nurses do. Her counsel, her listening, gave Ned a practical understanding of the special problems of each of his friends. Their physical set-backs grieved Erdene, their progress thrilled her. She confesses to no interest whatsoever in Amateur Radio per se, but the Handi-Ham System is another story altogether.

A news item rejoicing the hearts of the Handi-Hams: Rochester Exchange Club presented Ned Carman

with the 1968 Book of Golden Deeds Award for giving the handicapped a new lease on life. It was noted at the award presentation that no one person really knew all that he had accomplished, because he did it without praise or recognition.

In the March 1969 FLYER Ned explained the reasons for incorporating the Handi-Ham System--benefactors were entitled to a tax deduction, the FLYER could be mailed at a lower rate, and affiliation with MiSCCA would be permitted. (Ned was determined that this affiliation would be a mutual benefit. One of his last planned projects--carried out two months after his death -- was a used book sale for the benefit of the United Fund.)

From the FLYER, Feb. '70: Minnesota Society for Crippled Children and Adults (MiSCCA) has accepted us as an affiliate and will support the Handi-Hams in 1970 to the merry tune of \$2000. With such a great privilege descends a grave responsibility, one which each of you Handi-Hammers should help shoulder with your personal time and work. Work and school may leave you only a short time daily for ham radio, but the hours you contribute to the Handi-Ham System will help all of us live up to this responsibility. "

FLYER. . April, '70: Invitation to the Handi-Ham and MiSCCA Affiliation Celebration Handi-Hammers will be driving and flying in from as far out as Jim Mowery at Tracy (he's busing in) to party-celebrate our SUPPORT from MiSCCA. We are inviting the Schoenbohms, Klawitters, and all from MiSCCA who can come plus Rochester United Funders, and ABCers (Ability Building Center). The Rochester Paraplegic Club is staging its fund-drive chili supper just across the hall -- so we will all be buying tickets to support their effort. Soup for those who find chili too ticklish for their ribs. . . Ham station will be set up and operated by Handi-Hammers for the benefit of visitors.

Epilogue: The ham station was a lively, jolly place. One spectator was a slight, intent man with tear-filled eyes. It was Dr. Gordon Martin, head of Rehabilitation at the Mayo Clinic.

Donations and public funding made it possible for Handi-Hams to concentrate more attention to achieving competent technical work, to effective instruction of students. The realization that their radio work was funded by people who gave for the specific purpose of advancing amateur radio was a real incentive to work, work, work. If a handicapped person had to relinquish the idea of becoming a ham, Ned always kept him on his personal friendship roster, calling on him and keeping in touch. However, he was politely emphatic about the use of the System's equipment; if it were not being used regularly and intelligently, folks were simply asked to return them.

(Continued in next month's issue.)



Left to right: Ward Jensen, WØTLE, Alta Mitchell, WAØVTZ, Jim Svigel, and Les Taylor, WAØQIT.



Reach Out!

DK2HW visits WA9UEK

by Arthur Pahr, WA9UEK

In July, the Kiel, Wisconsin, Municipal Band flew to Kiel, Germany, to perform several concerts. This July, Das Musikkorps Der Freie Turnerschaft, "Vorwärts," of Kiel, Germany, completed the exchange between the sister cities by performing in and around the Kiel, Wisconsin, area.

At a reception for the German visitors at the beginning of their ten-day visit, I was talking with a member of their group in my rather poor German. It was apparent that his English was better than my German, so I switched to English and asked him if he knew what a radio ham was, and if there might be one in their group. Odds were against finding one in a group of only 63, but his face lit up and he said, "I am one! I am DK2HW!"

Hans-Walther Wagner and I had a two-hour eye-ball QSO and made arrangements to spend the following Saturday visiting the stations of a few members of the Sheboygan County DX Association. We gave Chris Bauer (W9NVJ) a hand in fixing the rotator on his quad and at the same time chewed the rag about DX. Later we

stopped by to see Marv Bartz (W9MYG) and George Menart (K9YXA) for more DX talk.

On the topic of rare DX, Marv, Chris and I all told Hans that someday we hoped we could work JY1. His response was that he has heard King Hussein many times at 20 over 9, but could never break the pileup with his 100 watts and indoor dipole (I've never even HEARD JY1).

Later, at my QTH we did some operating during the RSGB Field Day event and netted a few contacts. A "CQ DX" produced no results, but we did call HC1ML in response to his CW and both of us talked with Max for a short while. Also, Hans thought 2 meter FM was very interesting (my DX link with K9YXA). Before ending our visit we set up a schedule for a few days after he got back to Germany. The schedule came off as planned, although his signal was not too strong here.

Hans is a college student in Hamburg, Germany, majoring in economics. As a result, he gets home to Kiel only on weekends, so his ham operation is limited. He does enjoy DXing, with something like 115 countries worked but "not so many confirmed." Also, he would like QSOs with the western U.S.A., but has a hard time hearing them due to "the very strong signals from the U.S.A. East Coast."

His rig is the FL-100 xcvr to a dipole hung from the ceiling of a tenth floor apartment. Hans says the apartment house owner will not permit him to put an antenna on the roof of the building.

Incidentally, the membership of the Kiel, Wisconsin, band is 55 and three of us are radio amateurs.

The motto adopted by the two musical groups is "Freundschaft Durch Musik," Fellowship through music. DK2HW and I can add another--"Freundschaft Durch Radio."

(From "The DX'ers Magazine")

Book: Medical Electronics

INTRODUCTION TO MEDICAL ELECTRONICS--FOR ELECTRONICS AND MEDICAL PERSONNEL (Tab Books No. 630), by Burton Klein, published by Tab Books, Blue Ridge Summit, PA 17214, 272 pages, \$9.95 hardcover, \$6.95 paperback

For the first time ever, a single book ties together--successfully--two highly technical disciplines (medicine and electronics) in a manner that can be understood and digested by members of both professions!

For nonmedical personnel, the human body is described in depth, as an anatomical and physiological system. There is a continuing tie-in of physiological activities of the body with the equipment that is designed to detect, amplify, and present data signals concerning the body.

As an aid to cross-discipline understanding, one section of the book is devoted to electronics for non-electronic personnel. The discussion covers basic principles of physics and electricity in simple fashion, giving only sufficient background so that medical personnel will be aware of power, voltage, current, grounding interrelationships as they relate to safety for the patient and accurate use of the electromedical equipment.

The various categories of electromedical equipment are keyed to physiological functions and electronic presentation (diagnostic machines). Many types of equipment are covered, from transducers (pickups), to building blocks such as amplifiers, to data readout, such as

galvanometers and oscilloscopes. Included are such areas as proper use of equipment, patient and equipment capabilities and limitations, and design notes.

Maintenance, fault sensing, fault reporting, equipment management and follow-up for preventive maintenance, servicing, purchase review, administrative responsibilities, and setting up a medical electronics lab--all these and more are detailed in depth.

Contents: What is medical electronics--Anatomy and physiology for medical personnel--Electronics for medical personnel--Electromedical equipment--The hospital and electronics--Today and tomorrow--Educational requirements... and much more.

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AMSAT OSCAR 6 QUESTIONNAIRE

Please complete and return this questionnaire to AMSAT, P. O. Box 27, Washington, D. C. 20044. This information will assist AMSAT in evaluating the effectiveness of the OSCAR 6 project and in planning future satellite projects.

Name and Call _____

QTH _____

1. Have you participated in the OSCAR 6 program in any way? _____
2. Have you received the ten meter downlink? _____
3. Did you receive the 435.1 MHz beacon during its active life? _____
4. Have you successfully transmitted through the OSCAR 6 translator and received your own return signal? _____
5. Have you made a successful two-way contact via OSCAR 6? How many? _____
6. Have you sent a report of your OSCAR 6 activities to AMSAT or ARRL? _____
If not, your report would be greatly appreciated.
7. What modes of operation via the OSCAR 6 repeater have you tried? _____

8. What special experiments have you tried (power levels, new modes, special scheds)? _____

9. Did the fact that the OSCAR 6 repeater downlink was in an H. F. band prevent your participation with OSCAR 6? _____

10. Will the 146, 435, and 2304 MHz experiments planned for OSCAR 7 (A-O-B) change your thinking about using OSCAR 6? _____

11. Are you simply not at all interested in satellite work? Check one:
____ That is correct.
____ No, I have an interest.

12. How do you feel satellites in the amateur service can be made better? _____

13. What areas do you feel should be emphasized? Indicate "Yes" or "No" to

- Educational Benefits _____
- Public Service _____
- Scientific Experiments _____
- Contests, DX, Rag-chewing _____
- Other _____

If you need additional space to answer any of these questions, or if there are any comments you wish to make, please do so on an additional sheet of paper. Any further comments you might have will be gratefully appreciated.



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by Nick Hauck, K6QPE

Someone wrote to the editor of this publication asking him to put a fire under me so that I would get the SSTV column going again. It is nice that someone missed it.

In just the few weeks that I have been off the air, due to the theft of some equipment, so many things have been happening in the world of Slow Scan.

Before I bring you up to date, I'd like to tell you I've replaced my old tube equipment for the latest design of solid state. The Kenwood TS 900 has been with us now for almost a year, but few have been using it for SSTV. Except for a driver and two finals, it is all solid state. What is important for SSTV is the cooling fan that comes standard at no extra cost. My only criticism of the TS 900 is that the Mic gain control is on the side of the rig and requires some dexterity to maintain the proper power levels when operating the SSTV. This minor problem has been eliminated on the new-

est "little brother" of the TS 900. The new TS 520 is self-contained, with AC/DC supplies and all solid state except for two of the 6146s in the final and, also standard, a cooling fan. Almost \$200 less in cost and maybe not as shiny, but with a special DX speech-processing circuit that makes it a "neat" unit. Using both rigs will allow us to use ISB.

I'm glad you asked... "ISB" means independent side band. Transmitting video (SSTV) on upper sideband and audio on the lower sideband gives you the opportunity of running a commentary simultaneously. Hopefully, the others in the QSO are set up as you are and will enjoy your comments.

This past weekend, I was eager to demonstrate my SSTV to another ham who had never seen SSTV. This particular weekend was very busy with a contest. Some funny boy (?) kept putting a rather prohibitive slogan on the screen as to how he felt about the contest. Trouble was, we couldn't "thank" him because he didn't sign his call. Those who saw it, I am sure, got a good laugh. My guest in the shack was quick to ask, "Can they do that?" We discussed how back in the early AM days, most of the amateurs and radio clubs took care of policing the airways. True, the FCC does not own any SSTV gear to monitor SSTV, but we can allow ourselves to "slip" or "fall" into an area that some would consider inappropriate. I don't want to discuss what we can and cannot transmit, but like Copthorne Macdonald (WØORX), "the Father of SSTV," has told us, "Toy or tool." Like the commercial says, "Only YOU know for sure."

I have been told that many SSTVers are lying awake at night dreaming of ideas for the First Slow Scan Contest. Dec. 31 is the deadline for submitting the six-minute-maximum taped programs. One thing the contest officials, 73 Mag-

azine, forgot to include in the contest instructions was more information on content. Will some simply open Playboy, or will some use this opportunity to express their feelings about Watergate? One of Wayne Green's rules is, "Anything goes." #%*#%*. . . I think he will get some static about that. Should there have been definite categories? Technical, travel, instructive, recreation or comedy? Those who enter will find four to six minutes without frame repetition, which is asked for, will be hard to come by. The winner, in my opinion, will have to use frame selection, color reversal and other tricks that are being seen today on 14.230, the SSTV frequency. Perhaps next year's contest will include a more detailed explanation of what is expected. My hat is off to ROBOT, as they are supplying the winner with a new Robot Model 61 Fast Scan Viewer, something we could all use.

Bob Schloeman (WA7MOV) is working on receiving facimile transmission from our weather satellites. Imagine walking into your shack and turning your SSTV monitor and VHF receiver and SEEING what the weather picture is. In the October issue of 73 Magazine, on page five, Dave Ingram tells how it is done.

McMurdo station, Antarctica, has started their own closed circuit TV programming. Up until several years ago, we used to run phone patches for ships at sea. The Navy Dept. has no excuse now to prohibit patching from ships. If any of you out there have any real concern, you might contact Navy MARS or the Navy Dept. It is about time for the Navy to realize that phone patches and SSTV patches are a necessary morale-builder. For a man at sea to actually see his family would mean a lot to both parties. After all, the SS Hope is doing that very same thing. Christmas is at hand, what better time for the Navy to return this great service.



By Charles Del Vecchio—The Washington Post
Lois Vines (right foreground) makes oral defense of her Ph.D. thesis before three Georgetown University faculty members and two radio operators with her faculty adviser monitoring the test from about 2,500 miles away.

WA3FXJ + HK5AIT = Ph.D.

by Bart Barnes

WASHINGTON, D. C. -- It took just about 49 minutes one recent afternoon for ham radio operator Ralph Delligatti at Georgetown University's Amateur Radio station to reach Luis Trejos, another ham operator at HK5AIT, more than 2,500 miles away at Cali, Columbia.

"Hotel-Kilo-5-Alfa-India-Tango, this is Whiskey-Alfa-3-Foxtrot-X ray-Juliet, WA3FXJ in Washington, D. C., calling on schedule."

Then, Delligatti turned the broadcast over to Georgetown graduate student Lois Vines,

Trejos to Georgetown professor Jean Marie Bucher and the examination began.

Examination?

It was, for Mrs. Vines, the last step in a struggle that began in 1966 to earn her Ph. D. in French literature from Georgetown. By this spring, she had completed all the necessary steps, finished the course work, passed the oral and written exams, and completed her thesis.

All that remained for her to win the degree was a successful oral defense of her thesis before her mentor, Dr. Bucher.

Except that Bucher was in South America on a sabbatical leave, writing a book.

It was Georgetown's acting graduate school dean, the Rev. Francis P. Dineen, S. J., who had the idea of a ham radio hookup with Columbia for Dr. Bucher to grill Mrs. Vines on her thesis.

He got Bruce E. Strem, a Georgetown faculty member in the department of psychiatry, a ham radio buff and the faculty advisor to station WA3FXJ to handle it at the Washington end and Trejos agreed to handle it in Cali.

There is sort of a worldwide fraternity of ham radio operators--270,000 in the United States alone--Strem explained, "and we respect each other's rights."

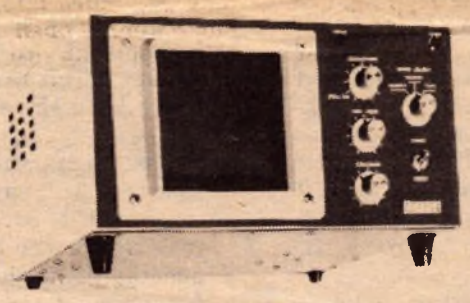
So when Delligatti asked for a clean frequency to permit Bucher to conduct his examination, the other hams tended to cooperate by staying away from that frequency.

All of which was fortunate for Mrs. Vines, since the examination was conducted in French and was fairly technical, dealing with the influence of Edgar Allen Poe on the French poet Paul Valery--the subject of her thesis.

The examination lasted just about an hour and it included questioning by the two readers of Mrs. Vines' thesis, Daniel Dupecher and Pierre Maubrey, with that conversation being monitored by Bucher in Columbia.

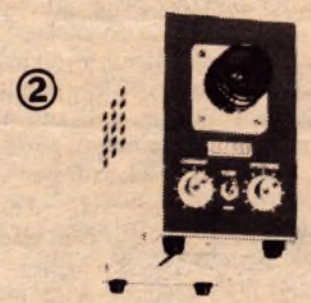
At the end, everybody congratulated Mrs. Vines and began calling her Dr. Vines and she got ready to return to her husband and child in Ohio, where she teaches French at Ohio University.

(From the Washington, D. C. "Post")



①

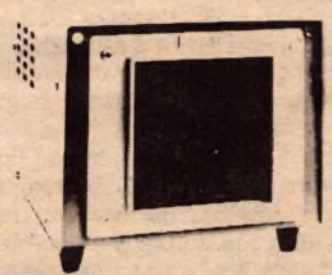
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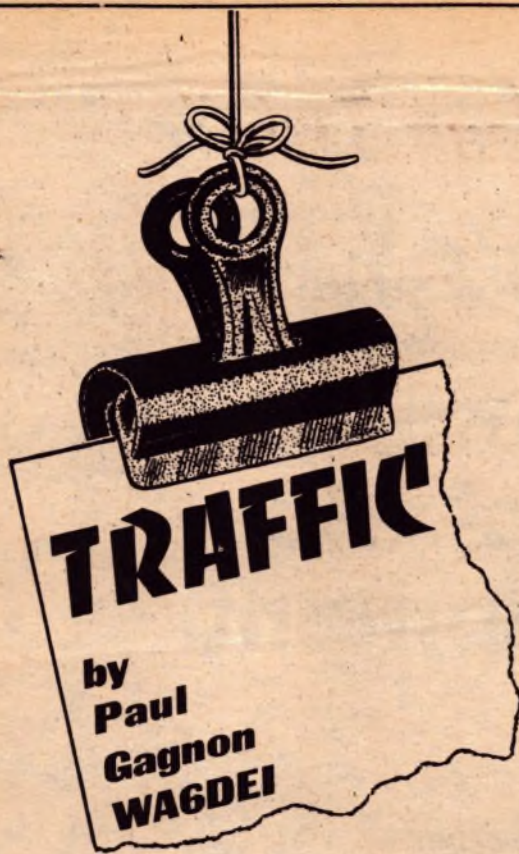
Call _____

Address _____

City _____

State _____ Zip _____

California residents add 5% sales tax. Prices do not include shipping.



"NR 101 R HXE WA6DEI 12 Camarillo
Calif 2340Z Aug 7"

The number is a serial number assigned by the originating station. The ARRL log book has a convenient form in the back to keep track of numbers used. If you use a different type of log, write the ARRL and ask for CD Form 3. Commonly, each year starts over with Message No. 1.

The precedence can be routine, priority or emergency. This is determined by the originator and the originating station. Nearly all messages are routine. Priority messages are important messages having a specific delivery time limit. Messages coming out of an emergency area for notification of health and welfare may be priority. Emergency messages involve life and death urgency. During normal times, these will be extremely rare, since regular phone lines would be used. An additional precedence recently added is the "Q precedence" used for a request for health and welfare reports coming into a disaster area.

The handling instructions are optional. They serve as operator notes to provide the operator specific instructions regarding the message. A complete list of HX prosigns is available from the ARRL as Op AID 9B. They are also on CD Form 3.

The station of origin is the call of the first person who sent the message over the air. If you receive a message from another ham by telephone, your call is the station of origin, since you are the first to send it. You are also responsible for its contents.

The check is the number of words in the text. It is important that the check be correct and that when you receive a message you confirm the check to assure no words have been missed. QRM and QSB these days make it real easy to drop a word. Amateur messages only include the words between the BTs and do not include the signature, as MARS does. Writing the text in groups of five words enables you to confirm the check at a glance. The check tests the accuracy of the message. Query the operator sending the message if your check does not agree. The following examples will help:

H H Hoover	3	words
Sioux City	2	"
486-9766	1	"
6146B	1	"
Fifty six	2	"
4U1TU	1	"

The place of origin is the city where the message actually originated. This is not necessarily the location of the originating station. For instance, when originating a message from someone in a neighboring city such as Ventura, I list the message as originated in Ventura, even though I live in Camarillo.

The filing time is optional. Most people use GMT.

The date indicates the day of origination. Be careful that the time and day correspond. Don't use GMT for one and local for the other, since they overlap. It is not necessary to send the year--we know that--just the month and the day.

The next basic part of the message is the address. The address should be as complete as possible. If addressed to a person, the full name, address, ZIP and telephone number should be included. You can get the telephone number by direct dialing any information operator in the country, free of charge. If the only address available is a post office box, the phone number is essential unless you want the message mailed at the other end. A woman's name should be listed as it appears in the telephone book, i. e., Mrs. John Doe vice

Mrs. Mary Doe. For all military messages going overseas, the APO or FPO ZIP number is required. At the present time, MARS will not accept messages going to APO 96601, which is to ships at sea.

Next comes the text. The text is what the sender has to say. If possible, keep the length to around 15-20 words or less. Use telegram-type wording to keep it concise. Remember that punctuation is not transmitted. Use X (X-ray) for a period and "query" for a question mark. Do not use an X at the end of the text. If possible, numbers should be spelled out. Do not abbreviate.

In the ARRL log (CD Form 3), you will find a list of abbreviated texts. These are called "ARL Texts." They are to make handling large amounts of traffic faster. This is especially important in time of disaster or during the peak seasons of Christmas, Thanksgiving and Easter. When used, the ARL designator appears in the check and in the text ahead of the correct ARL number ("Check ARL 7; typical text: ARL Sixty Three ARL Seven," means "Most sincere wishes for health, happiness and prosperity X Reply by Amateur Radio."

The last part of the message is the signature. In routine types of messages, the signature may be the first name; in a high-precedence message, the full name and title of the sender should be given. When you originate a message for someone you don't know, always get his name and phone number so you can reach him in case of delivery problems or a return message.

These are the basic parts of a message. You should practice until you have it memorized. Here is a complete sample message:

NR 101 R HXE WA6DEI ARL 14 Camarillo
Calif 2340Z Aug 7
Mrs John Doe
123 Sixth Street
Twentynine Palms Wyoming
513 555 1212
BT
ARL Sixty Three ARL Seven
X hope all is well with you X love
BT
Lynne

Hopefully, we have given you enough information to originate your own message and to handle one on the air. Next month we will discuss delivery of the message, message servicing, and your record keeping.

QSL

The following information was received this month. Remember, if you have any information on your net that you wish to disseminate, or comments, address your letters to WA6DEI, 1791 Hedon Circle, Camarillo, CA 93010.

Kurt Meyers (W8IBX), the manager of the "Hit and Bounce Slow Net," advises that the new manager of the "Hit and Bounce Net" is Walt Russell (W2OE). Congratulations, Walt!

The Hit and Bounce Net meets on 7070 kHz at 1330Z daily. The Hit and Bounce Slow Net meets on 7140 kHz at 1300Z on Sunday, Monday, Friday and Saturday (Note the time changes due to the switch to standard time). These 40 meter CW nets have check-ins from W1, W2, W3, W4, W5, W8, W9 and W0 call areas. Quite a coverage! With old time traffic handlers like Kurt Meyers (W8IBX), Walt Russell, Ferdinand Thiede (W2EC), Alfred Burke (W3VR), Conan Barger (W3CVE), Mary Burke (W3CUL), John Wathen (W4BAZ) and Bill Skarstedt (VE2DR) as regular check-ins, you know this is a high-quality net. In September, the HBN averaged 16.9 messages per session. You should be able to check
(Turn to page 48, please.)

Last month we discussed three types of nets and tried to encourage you to check into the nets that you hear on the air. Now that we have you checking into the net, your next question may well be, "What do I do when they ask me to handle a message?"

That is a very valid question and often asked. It is also the reason many people don't check into nets.

Radio amateurs in the United States enjoy the privilege of handling third-party traffic. The ARRL was originally organized to set up a system of cross-country relays back in 1914. This evolved into the National Traffic System. Today there are many amateurs who do not know how to handle a message and never have done so. A ham does not have a complete operating education unless he can handle a piece of written traffic effectively. Basically, traffic handling is simple and easy for anyone to learn. It is not necessarily complicated or time-consuming. Here are some pointers regarding the message itself, its origination and format.

Originating the message

All messages handled daily by the many nets that exist across the country had to have a start somewhere. There is an art to originating traffic properly, but no matter how it originates, it will have a better chance of reaching its destination promptly and accurately if it is originated in the proper format with all necessary information.

Traffic handling is a method of conveying record information in a standard format from amateur station to amateur station. Often, the operators do not even know the originator or the addressee. Formal traffic is "record communications in regular message form," as it is referred to in the FCC regulations. When a message is to be handled by a relay station, it must be in a standard format so all operators concerned know what is coming next.

A standard message has the following components: preamble, address, text, and signature. The components of each of these should be noted, since it is much easier to copy traffic if you know what is coming next. A preamble is further broken down into: number, precedence, handling instructions, station of origin, check, place of origin, filing time, and filing date.

A typical preamble may look like this:

APOLLO PRODUCTS *by "Village Twig"*

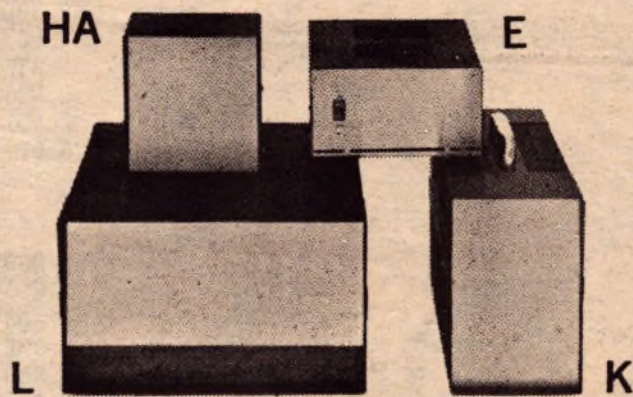


1500X-2

Rotary Antenna Switch

Single pole, 3 position Antenna Switch. Low SWR. Use up to 30 MHz. 500 Watt handling capacity. Sloping Front Console Cab.

\$12.95



Model	Dimensions	Resale Net
"E"	6 1/2 x 3 15/32 x 7 1/16	8.25
"HA"	5 1/8 x 5 1/2 x 4 (Blank Panel)	8.95
"K"	4 3/4 x 7 3/8 x 11 W/Handle	13.50
"L"	11 1/8 x 6 1/8 x 12 3/4	20.50



**2100X-2
SWR
Bridge**

Large Meter - Sloping Panel Cabinet - Rubber Feet - Keep in Antenna Line up to 1 Kilowatt

\$29.95



**900X-2
Wattmeter**

Measures RF in 2 ranges 25 and 250 watts. 52 Ohm input.

\$29.95



450X-S Antenna Switch

3-Position Slide Switch Low Loss - Walnut-grain Finish Chassis - Gold Cover

\$5.95



"L"

package enclosure "Shadow Box" machined with: 2-SO239, 1 - Pilot Light, 3 - Rocker Switches, and 2 - Knobs

pkg. **29.95**

1700X-2 Vertical/Horizontal Antenna Switch

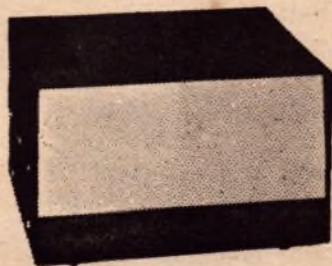
Allows operator to select any one of 3 antennas or dummy load. Two Antennas can be switched in simultaneously. New Sloping Front Console Cab.

12.95

700X-2 KW Wattmeter

Dummy Load Wattmeter for 52 Ohm Input. Measures RF in 4 ranges to 1000 watts. Measures modulation percentage on calibrated scale. Portable.

\$124.50



"LITTLE GIANT"

Vacation or Occasional Miniature Antenna. Measures 27" high, 22" wide, 4" thick! 7 MHz antenna 40 meters. Ideal for apartment motel, hotel, trailer camper, travel use, 1973 production, if demand warrants.

Meter 0-1 MA to fit "L" box ppd. **5.00**

APOLLO PRODUCTS

Box 245 Vaughnsville, Ohio 45893

Phone (419) 646-3495 · Evening (419) 646-3495



Western 75 Meter Nets

by Dave Welton, WB6PLX

This is a list of 53 nets that are in operation on the 75 meter band. This list has been compiled with accuracy in mind, but I cannot guarantee all details. Use it as a basic guide.

The list has been compiled for two reasons. The first is to familiarize the ham operator with the frequencies and times of operation of the major nets. This is so he can avoid QRMing their regular operating frequency. The second reason is to help the WPSS member find nets that specialize in the area he is looking for. Although the Western Public Service System is indeed a great net (best on 75!), we cannot adequately assist a traffic request for all western areas. This list could be consulted to find a net specializing in the needed area, therefore handling the traffic faster.

It must be noted that all times are in Pacific Standard Time. In some cases, one hour must be added to find the operating time of the net during Daylight Savings Time. Some of the smaller nets occasionally get pushed to one side of their normal operating frequency, so tune around before you give up on them.

I enjoyed compiling this list, and in the process of compiling it, I discovered that all nets are different. Each net has a specific purpose. I do suggest that you monitor each net before you check in, in order to understand the operating procedure and purpose of the net. Make sure you check-in at the proper time so that you won't disturb the net procedure. The control stations are always most cooperative in helping non-member check-ins. Look into some of these nets, you might be surprised how interesting some are!

around the world with Worldradio

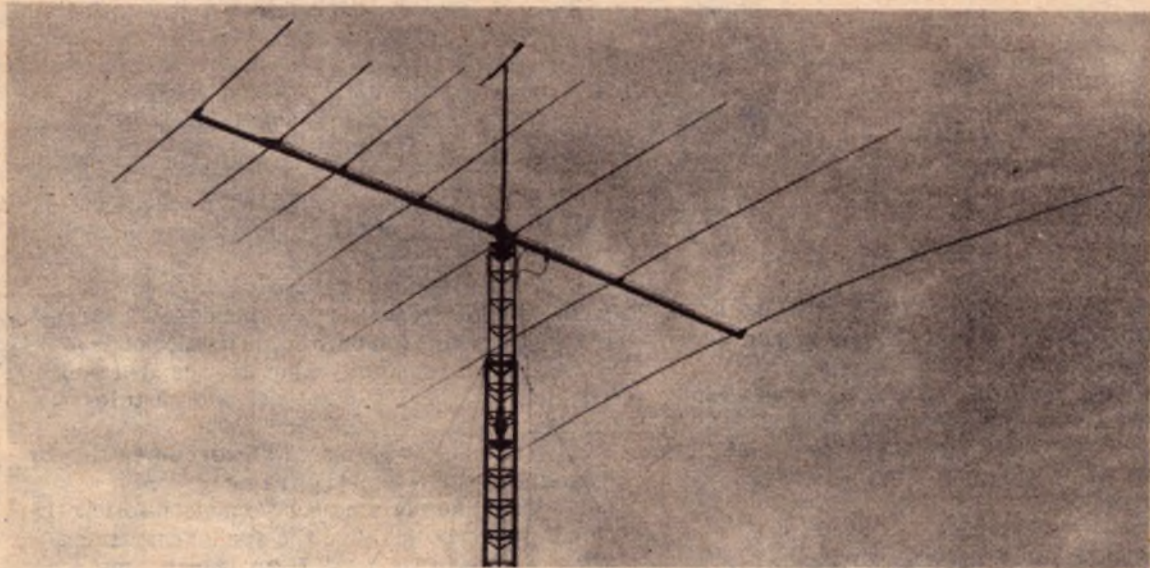


<u>ARIZONA NETS</u>	<u>FREQ</u>	<u>TIME</u>	<u>DAYS</u>
Arizona Emergency Net	3.992	6 p. m.	Nightly
Arizona Post Office Net	3.915	5 p. m.	Nightly
Arizona Traffic Net	3.992	8 p. m.	Nightly
<u>CALIFORNIA NETS</u>			
Astro Net	3.885	7 p. m.	Nightly
Calif. Post Office Net	3.918	8 p. m.	Nightly
Calif. Traffic Net	3.905	6:30 p. m.	Nightly
Calif. Weather Net	3.954	5:30 p. m.	Nightly
Golden Bear Amateur Radio	3.975	7 p. m.	Nightly
Northern Calif. Emergency	3.920	10 a. m.	Sundays
Pacific Gas and Electric Net	3.910	7 p. m.	Nightly
San Joaquin Net	3.915	6:30 p. m.	Nightly
<u>COLORADO NETS</u>			
Columbine Net	3.989	6 p. m.	Mon-Sat
Colorado Emergency Net	3.890	8 p. m.	Sundays
Colorado Evergreen Net	3.808	8 p. m.	Nightly
Colorado High-Noon Net	3.895	11:30 a. m.	Mon-Fri
Colorado Post Office Net	3.965	7:15 a. m.	Sundays
Colorado Traffic Net	3.967	5:15 p. m.	Nightly
Colorado Weather Net	3.945	6:30 a. m.	Daily
<u>IDAHO NETS</u>			
Idaho Civil Defense Net	3.9905	7:15 p. m.	Mon-Fri
Idaho Farm Net	3.935	7 a. m.	Daily
<u>MONTANA NETS</u>			
Montana Traffic Net	3.910	6 p. m.	Mon-Fri
<u>NEVADA NETS</u>			
Desert Big Horn Net	3.910	9 p. m.	Wednesdays
Nevada Emergency Net	3.996	6:30 p. m.	Mon-Thurs
<u>NEW MEXICO NETS</u>			
New Mexico Post Office Net	3.940	5 p. m.	Nightly
<u>OREGON NETS</u>			
Oregon AREC	3.9935	7 p. m.	Nightly
Oregon Beaver State Net	3.908	5:30 p. m.	Nightly
Oregon Civil Defense Net	3.9935	8:30 p. m.	Mon-Fri
Oregon Emergency Net (OEN)	3.980	6 p. m.	Mon-Sat
Oregon Noontime Traffic Net	3.920	12 Noon	Daily
Oregon Port Office Net	3.920	6:30 p. m.	Wednesdays
<u>UTAH NETS</u>			
Utah Public Service Net	3.988	9 p. m.	Nightly
<u>WASHINGTON NETS</u>			
Columbia Basin Net	3.960	7 p. m.	Nightly
Wash. A. R. Traffic System	3.970	6 p. m.	Nightly
Wash. Civil Defense Net	3.9875	10 a. m.	Mon-Fri
Wash. Noontime Net	3.970	11:30 a. m.	Daily
Wash. Post Office Net	3.920	6:30 p. m.	Wednesday
<u>PACIFIC COAST NETS</u>			
Copper Net	3.978	7 p. m.	Mon-Fri
Mission Trail Net	3.928	7 p. m.	Nightly
Northwest A. R. Monitoring Service (NAMS)	3.970	9 a. m.	Daily
Northwest Single Side Band	3.945	6:30 p. m.	Nightly
Northwest Technical Net	3.970	2 p. m.	Sundays
Pacific Coast County Hunters	3.939	9 p. m.	Nightly
Pacific Coast Eyebank Net	3.960	9 p. m.	Nightly
Skeeter Net	3.901	6:30 p. m.	Nightly
Taco Net (Mexico)	3.855	7 p. m.	Nightly
Western Country Cousins	3.970	9 p. m.	Nightly
Western Public Service System	3.952	6:30 p. m.	Nightly
<u>MIDWESTERN NETS</u>			
Central Country Cousins	3.985	9:30 p. m.	Nightly
Kansas Single Side Band Net	3.920	6:30 p. m.	Nightly
MidCARS	3.903	6 p. m.	Nightly
Midwest Net	3.942	9 p. m.	Nightly
Razor Back Net	3.995	8:30 p. m.	Nightly
Southwest Traffic Net	3.935	7 p. m.	Nightly

(from the Western Public Service System's "NEWSLETTER")

TRI-BANDER NO TRAPS!

KLM ELECTRONICS



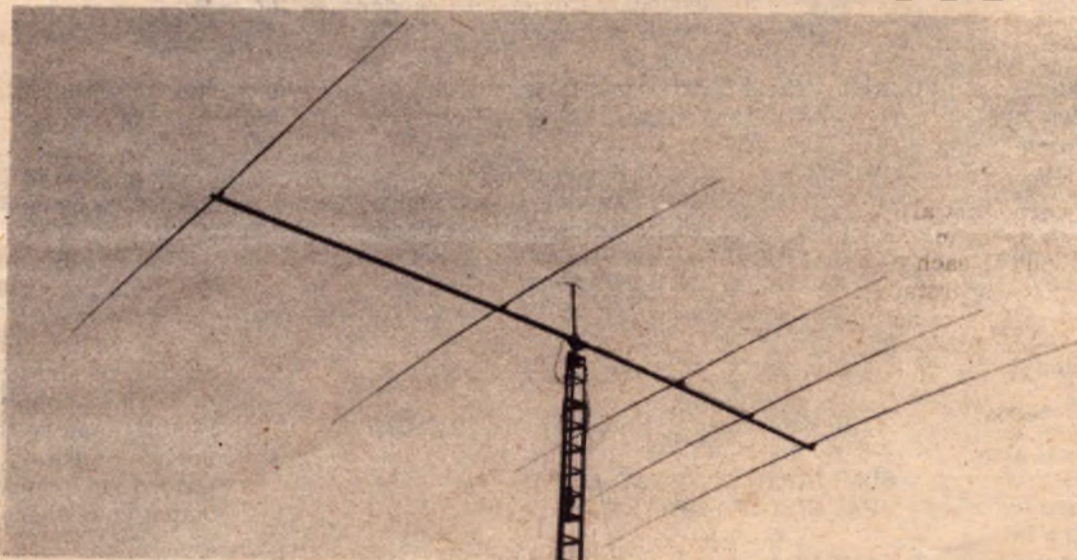
4 KW PEP

FREQ RANGE 13.9 - 14.4 MHZ
21.0 - 21.5 MHZ
28.0 - 30.0 MHZ

PLUS EVERYTHING FROM 13 - 30 MHZ

**KLM13-30-7
ONLY \$289⁹⁵**

NEW 5 ELEMENT



+10 db
←
THIS WAY

-30
f/b
→
THIS WAY

FREQ RANGE 13.9 TO 14.4 MHZ FLAT VSWR CONSTANT GAIN

20 METER MONOBANDER

\$199⁹⁵

Write
For Full Specs.



VHF SOLID STATE POWER

YOURS NOW PA10-140B \$179⁹⁵
10 Watts In 140 Watts Out

AMPLIFIERS

VHF POWER AMPLIFIERS					
Frequency (MHz)	Model	Input Range (w)	Nominal P _o (w)	Nominal Amps	Price
144	PA2-12B	1 - 4	12	1.8	\$ 44.95
	PA10-40B	5 - 15	40	5.0	79.95
	PA10-70B	5 - 15	70	7.0	129.95
	PA2-70B	1 - 4	70	8.0	149.95
	PA10-140B	5 - 15	140	18.0	179.95
NEW	PA30-140B	15 - 40	140	15.0	169.95
	PA2-140B	1 - 4	140	20.0	199.95
220	PA10-60F	5 - 15	60	7.0	139.95
440	PA5-25C	4 - 8	25	5.0	129.95
	PA2-30C	1 - 4	30	6.0	149.95

*Availability to be announced

Calif. residents add 5% sales tax, add \$2 per unit for ppd. USA prices subject to change without notice

ANTENNAS

HF - VHF - UHF - ANTENNAS			
KLM 13-30 - 7 EL	\$289.95	KLM 220-225 - 9 EL	20.95
KLM 13.9-14.4 - 5 EL	199.95	KLM 220-225 - 11 EL	25.95
KLM 50-52 - 8 EL	55.95	KLM 220-225 - 14 EL	34.95
KLM 50-52 - 11 EL	89.95	KLM 420-450 - 14 EL	19.95
KLM 144-148 - 7 EL	21.95	KLM 420-450 - 27 EL	41.95
KLM 144-148 - 8 EL	26.95		
KLM 144-148 - 9 EL	31.95	Matching Baluns spec. ant.	\$13.95
KLM 144-148 - 11 EL	35.95	Special Baluns spec. imp.	\$14.95
KLM 144-148 - 12 EL	38.95	NEW 6 mtr. Balun	\$13.95
KLM 144-148 - 14 EL	45.95	14 EL Kit less boom 2 mtr.	\$34.95
KLM 144-148 - 16 EL	49.95	16 EL Kit less boom 2 mtr.	\$37.95

KLM ELECTRONICS 1600 DECKER AVE. SAN MARTIN, CA. 95146 (408) 683-4240 / 842-7349



The Radio Amateur Satellite Corp. is a non-profit, scientific corporation founded in the greater Washington, D.C., area. The purposes and objectives of the corporation are:

A. To provide satellites that can be used for Amateur Radio communication and experimentation by suitably equipped Amateur Radio stations throughout the world on a non-discriminatory basis.

B. To encourage development of skills and the advancement of specialized knowledge in the art and practice of Amateur Radio communications and space science.

C. To foster international goodwill and cooperation through joint experimentation and study, and through the wide participation in these activities on a noncommercial basis by radio amateurs of the world.

D. To facilitate communications by means of amateur satellites in time of emergency.

E. To encourage the more effective and expanded use of the higher frequency amateur bands.

F. To disseminate scientific, technical and operational information derived from such communications and experimentation, and to encourage publication of such information in treatises, theses, trade publications, technical journals or other public media.

Membership in AMSAT is open to all radio amateurs and other interested persons. AMSAT encourages the participation of all interested individuals in its activities regardless of membership and invites licensed Amateur Radio operators of all countries to engage in radio transmissions to the satellite(s). Membership is possible in two categories:

A. An interested individual may become a Member by filling out and returning a membership application, to be found elsewhere in this publication, along with dues payment.

B. A recognized group or organization interested in supporting AMSAT's goals and objectives and wishing to participate constructively in its activities may become a Member Society by completing and returning a Member Society application together with their dues payment. This class of membership was established to encourage interested groups to participate in AMSAT projects within the Member Society's own area of interest.

An annual financial contribution is requested from Members and Member Societies in an effort to offset the costs of printing and mailing newsletters. This donation may be waived at the discretion of the Board of Directors. Donations are tax deductible.

Members of AMSAT are entitled to

A. The opportunity to participate in the activities of AMSAT and to vote in the elections for the Board of Directors.

B. Receive newsletters and other information which may be generally distributed by AMSAT.

C. Be acknowledged as supporting the activities of AMSAT with a membership certificate or card.

Member Societies of AMSAT are entitled to

A. Participate in AMSAT's activities.

B. Nominate two Members per annum as candidates to the Board of Directors.

C. Receive newsletters and other information which may be distributed by AMSAT.

D. Be acknowledged as supporting AMSAT's activities with a Member Society card or certificate.

AMSAT-OSCAR-B SPACECRAFT

A-O-B (to be known as OSCAR 7 after launch) is an international effort now involving four nations. The A-O-B systems developed in each country are as follows:

Germany: AMSAT Deutschland Repeater, Spacecraft Structure, Battery Charge Regulator, 28V Power Regulator, Antenna System--DJ4ZC, DJ5KQ.

Australia: Two Redundant Command Decoders, Teletype Telemetry Encoder--VK3ZPI.

Canada: 435.1 MHz Beacon Transmitter--VE3QB and VE2AO.

United States: 2M/10M Repeater, Morse Code Telemetry Encoder, Experiment Control Logic, Instrumentation Switching Regulator, Solar Panels, Battery--K3JTE, W3GEY, WA4DGU, W3DTN, Marie Marr.

Codestore--W5CAY.

S-Band Beacon Transmitter--KH6HLJ.

SUMMARY OF AMSAT-OSCAR-B SPACECRAFT SYSTEM

1. AMSAT Deutschland Repeater (designed by Karl Meinzer, DJ4ZC)

- . Input freq. passband between 432.125 and 432.175 MHz.

- . Output frequency passband between 145.975 and 145.925 MHz.

- . Power output (high power mode) is 14W PEP.

- . Downlink passband is inverted from uplink passband.

- . Repeater is 45% efficient using envelope elimination and restoration technique.

- . Linear Operation--SSB and CW are preferred modes.

- . Repeater is commandable to either 3.75 or 14W PEP output.

- . Telemetry beacon at 145.980 MHz (200 mW).

- . Uplink power required--300-400 w ERP.

2. AMSAT Two-to-Ten Meter Repeater (designed by Perry Klein, K3JTE)

- . Input freq. passband between 145.85 and 145.95 MHz.

- . Output freq. passband between 29.40 and 29.50 MHz.

- . Power output is 2W PEP.

- . Downlink passband is not inverted from uplink passband.

- . Linear Operation--SSB and CW are preferred modes.

- . Telemetry beacon at 29.50 MHz (not same as OSCAR 6).

3. Morse Code Telemetry Encoder (designed

by John Goode, W5CAY)

- . 24 analog input channels.

- . Converts each analog value into a two-digit number transmitted in Baudot code.

- . A third digit precedes the telemetry value and gives the line number in which the word is located.

- . Format is arranged four words per line, six lines per telemetry frame.

- . Morse code rate is commandable to 10 w.p.m. or 20 w.p.m.

4. Teletype Telemetry Encoder (developed by Peter Hammer, VK3ZPI, and Edwin Schoell, VK3BDS)

- . 60 analog input channels.

- . Converts each analog channel to a three-digit number transmitted in Baudot code.

- . Each three-digit value is preceded by its channel number, making a five-digit telemetry word.

- . The data is arranged 10 words per line by six lines per telemetry frame.

- . Two lines of status information follow the analog matrix and give the spacecraft time (i.e., time in "counts" from launch, one count equals 96 minutes).

- . Output keys 435.1 MHz beacon in FSK: 850-Hz shift; 45.5 Baud: (reversed from U.S. standard). Also keys 145.98 and 29.50 MHz beacons as AFSK, on command.

5. 435.1 MHz Beacon Transmitter (developed by Larry Kayser, VE3QB, and Bob Pepper, VE2AO)

- . Beacon output freq. is 435.10 MHz.

- . Power output is 0.4W at an efficiency of 45%.

- . Beacon is FSK modulated 850-Hz shift.

6. 2304 MHz Small Beacon Transmitter (developed by San Bernardino Microwave Society)

- . 0.1W at 2304 MHz.

- . Turned on by command only for 30-min. periods.

- . CW keyed--HI followed by 30-sec. carrier. Also keyed with Morse code telemetry on command.

7. Codestore--Message store-and-forward system (built by John Goode, W5CAY)

- . 896 bit memory capacity using COS/MOS shift register memory.

- . Loaded via command link.

- . Output code speed is 13 w.p.m.

8. Experiment Control Logic (designed by Jan King, W3GEY)

- . Selects the spacecraft operating modes.

- . Protects satellite against excessive battery drain by reducing repeater output power or by shutting it off completely.

9. Input Solar Power / Battery Charge Regulator (developed by Karl Meinzer, DJ4ZC, and Werner Haas, DJ5KQ)

- . Converts 6.4V at arrays to 14V to charge battery or to supply the spacecraft experiments.

- . Senses overcharge of battery and reduces charging current.

- . Senses failure of either of the two redundant regulators and switches to the opposite regulator automatically.

(Turn to page 30, please.)



CT5005 CALCULATOR

This calculator chip has a full four function memory, which is controlled by four keys, +M (adds entry into memory), -M (subtract entry from memory), CM (clear memory--without clearing rest of registers), RM (read memory or use as entry).



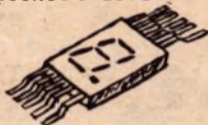
12 digit display and calc.
fixed decimal at 0,1,2,3,4, or 5
leading zero suppression
seven segment multiplexed output
true credit sign display
single 28 pin chip

Chip and data-----\$14.95
Data only (refundable)----- 1.00

MAN 3M

This low cost epoxy encapsulated LED is capable of displaying 10 digits 9 distinct letters, and bears solid-state reliability, making it compatible with standard digital IC's. Its compact spacing (5 digits per inch), makes it ideal for pocket calculators

Each, only \$3.00
Ten or more 2.50



5001 CALCULATOR

40 pin calculator chip will add, subtract, multiply, and divide. 12 digit display and calculate. Chain calculations. True credit balance sign output. Automatic overflow indication. Fixed decimal point at 0, 2, 3, or 4. Leading zero suppression. Complete data supplied with chip.

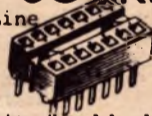
Chip and data, only \$9.95
Data only (refundable) \$1.00

LED SPECIAL

FL100 .39 each
3.50 for ten
29.95 for 100

SOCKETS

Dual-In-Line 14 pin 40¢ each
16 pin 45¢ each



High quality, gold plated

DM8880 (Sperry DD700 202) 7 segment high voltage nixie driver, only \$1.75

MC1013 ECL 85mc ff \$1.00
MC1023 ECL driver 2.00
MC1039 ECL-TTL interface 2.00
8850,9601-one shot multivibrator 1.00

741 SPECIAL

fully compensated operational amplifier with data sheet and page of application notes covering the basic circuits for op-amps.



each \$.45
ten for 3.75

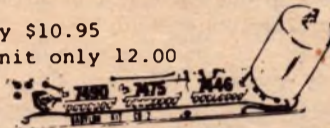
All IC's are new and fully tested leads are plated with gold or solder. Orders for \$5 or more will be shipped prepaid. Add 35¢ for handling and postage for smaller orders, residents in California add sales tax. IC orders are shipped within two workdays of receipt of order--kits are shipped within ten days of receipt of order. \$10.00 minimum on C.O.D.'s (phone in). (916) 9662111

Babylon Electronics
PO Box "J"
Carmichael, CA 95608

CD-2 Counter Kit

This kit provides a highly sophisticated display section module for clocks, counter or other numerical display needs. The unit is .8" wide and 4 3/8" long. A single 5 volt power source powers both the IC's and the display tube. It can attain typical count rates of up to 30 MHz and also has a lamp test, causing all seven segments to light. Kit includes a two sided (with plated through holes) fiberglass printed circuit board, a 7490, a 7475, a 7447, a DR2010 RCA Numitron display tube, complete instructions, and enough Molex pins for the IC's.....NOTE, boards can be supplied in a single panel of up to ten digits (with all interconnects) therefore, when ordering please specify whether you want them in single panels or in one multiple digit board. Not specifying will result in shipping delay.

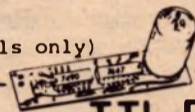
Complete kit, only \$10.95
Fully assembled unit only 12.00



CD-3 Counter Kit

Can be programmed to count to any modulus--2-9 for one kit, 2-99 for two kits, etc. Includes everything as in CD-2, two resistors, three diodes, but is without the 7475 quad-latch. Full instructions included----perfect for displaying seconds, minutes, hours, etc.

Complete kit, only \$9.95
(supplied in single panels only)



8000 series

Part Number	Description	Price
8200	4 bit comparator	\$1.60
8210	8 line to 1 line selector	1.40
8220	parity generator/checker	1.00
8223	256 bit programmable ROM	7.50
8230	8 input multiplexer	2.00
8233	2 input 4 bit multiplexer	1.75
8242	4 bit comparator	1.15
8251	BCD to decimal decoder	1.00
8261	fast carry extender	2.00
8266	2 input 4 bit multiplexer	1.50
8270	4 bit PI, SI, SO	2.00
8271	4 bit shift register	2.00
8274	10 bit PI, SO register	3.00
8280	45MC presetable decade counter	1.35
8281	45MC presetable binary counter	1.15
8290	presetable decade counter 75MC	3.50
8292	presetable decade counter 10MC	1.15
8520	25MC divide by "N" 2 to 15	2.00
8551	tri state quad latch	2.50
8570	8 bit SI, PO	3.00
8590	8 bit PI, SO	2.00
8275	quad bistable latch	.90

TTL DIP

LINEARS

NE531	op amp TO-5	\$2.00
NE560	phase lock loop DIP	3.25
NE561	phase lock loop DIP	3.25
NE565	phase lock loop TO-5	3.25
NE566	function generator TO-5	4.00
NE567	tone decoder TO-5	4.00
NE5556	op amp DIP	1.00
709	popular op amp DIP	.45
710	voltage comparator DIP	.50
711	dual comparator DIP	.40
723	precision voltage regulator DIP	1.00
747	dual 741 op amp DIP	1.00
748	op amp TO-5	1.00
LM100	positive DC regulator TO-5	1.00
LM302	op amp voltage follower TO-5	1.25
LM308	op amp TO-5	2.00
LM311	comparator TO-5	1.75
LM380	2W audio amp DIP	1.75
LM703	RF-IF amp epoxy TO-5	1.00
LM309H	5V-200ma power supply TO-5	1.00
LM309K	5V-1A power supply module TO-3	2.00

Silicon diodes (signal) only,
1 foot (60) diodes \$2.50

EPOXY TRANSISTORS

TO-5 and TO-18 mixed 1 ounce (40+)-----\$1.00

1 amp Silicon Rectifier
minimum 200 PIV many much higher, comes in unbranded epoxy case (fully tested)
15 for \$1.00

MOS by NATIONAL

Dynamic shift registers TO-5 only			
MM502	dual 50	BIT	\$1.25
MM506	dual 100	BIT	1.75
MM5006	dual 100	BIT	1.50
MM5013	1024	BIT	2.25
MM5016	512	BIT	1.50
Static shift registers			
MM504	dual 16	BIT	1.50
MM505	dual 32	BIT	1.75
MM550	dual differential analog switch		2.50

CMOS

CD4001	quad 2-input	\$.75
CD4002	quad 4-input	.75
CD4012	dual 4-input	.75
CD4023	triple 3-input	.75

DR2010 by RCA

A popular Numitron digital display tube. This incandescent five volt seven segment device provides .6" high numeral which can be seen at a distance of 30 feet. The tube has a standard nine pin base (solderable) and a left hand decimal point.



\$5.00 each
\$4.00 each for 5 or more

7400 series

Part Number	Price	Part Number	Price
7400	\$.35	74H53	.50
74H00	.50	7454	.35
7401	.35	74L54	.50
74H01	.50	74L55	.50
7403	.35	7460	.35
7404	.35	74L71	.30
74L04	.50	7472	.50
74H04	.50	74L72	.60
7405	.35	7473	.65
74H05	.50	74L73	.90
74H08	.50	7474	.65
7410	.35	74L74	.90
74L10	.50	74H74	.90
74H11	.60	7476	.70
7413	1.15	74L78	1.00
7420	.35	7480	.65
74L20	.50	7483	1.30
74H20	.50	7486	.80
74H22	.60	7489 (8599)	3.50
7430	.35	7490	1.50
74L30	.50	7491	1.15
7440	.35	7492	1.15
74H40	.50	7493	1.15
7441	1.60	7495	1.25
7442	1.30	74L95	2.00
7446	1.75	74107	.70
7447	1.75	74121	1.60
7448	1.15	74123	2.00
7450	.35	74153	2.00
74H50	.50	74181	3.75
7451	.35	74192	2.50
74L51	.50	74193	1.50
74H51	.50	74195	1.10
7453	.35		

DIP

LED's

MV-50 red emitting 10-40ma @ 2V \$.39

MV5020 red LED .45



MV-10B Visible red 5-70ma @ 2V .45
3.5 amp 400V rectifier \$1.25
8 amp 400V SCR IR 122D 1.00

Precision resistors--high quality parts manufactured by Dale, Corning Pyro film, Etc. These are all brand new with full length leads.

82	5% Dale 6.5W WW	\$.15
18.2K	1%	.05
20.5K	1%	.05
22.5K	1%	.05
26.1K	1%	.05
36.1K	1%	.05
36.5K	1%	.05
40.2K	1%	.05
49.9K	.05%	.10



REPEATERS IN MICHIGAN

by Art Geyer, K8SWW, WR8AAA

At this time, the State of Michigan has 14 repeaters on the air, with additional coverage from four machines across the river in Canada. All Michigan repeaters are on the standard 30 kHz, 600 kHz spacing to conform to the national plan.

We also have 13 more repeaters in the planning and construction stage. Three of the new ones are planned for the upper MHz using high input and low output.

The state has 34/94 machines in the cities of Lansing, Kalamazoo and Tawas in the Lower Peninsula, and VE3SSM at the Soo in the Upper Peninsula.

The 16/76 machines are in the cities of Grand Rapids and Detroit in the Lower Peninsula and Trenary in the Upper Peninsula. The Detroit 16/76 has a PL of 100 Hz but a tail of 15 seconds allows a mobile without PL to make the repeater and can be keyed up by someone with a PL.

Four of the repeaters use tone burst and three use 100.0 Hz. The repeater council is now suggesting PL frequencies to machines now on the air due to DX keying three or four machines at the same time on the same frequency pair. In Detroit, the 04/64 has auto patch and touch tone access to police via 911.

One of the highlights in the Detroit area is the RTTY weather print on 147.18 at 75 wpm. Many hams in southeastern Michigan watch the storms from this source.

The repeater council has split the state into three parts, and the Upper Peninsula has its own council. We meet four times a year in Lansing. The council works with the councils in Ohio, Indiana and Wisconsin to work out interstate problems.

The Michigan Area Repeater Council stands ready to help repeater builders and users.

REGULATIONS FOR REPEATER OPERATION, compiled by the Minuteman Repeater Assn. of Massachusetts

1. Do not call CQ or make a lengthy blind transmission into the repeater. The appropriate way to announce your presence on the repeater is by stating, "W1XYZ monitoring 82," or "61," or "73."

2. To join or momentarily interrupt an existing QSO, use the single word "Break W1XYZ." Use of the double or triple "break" is reserved for emergencies.

3. When a breaker is heard, he should be

immediately recognized and allowed to identify and state his purpose.

4. When a double or triple break is heard, operators should clear the frequency and stand by to render assistance.

5. When breaking to interrupt an existing QSO, the breaker should not begin an independent or lengthy cross-QSO without permission. Either join the existing QSO, QSY with the person called, or wait your turn for the frequency.

6. Let the repeater "tail" drop between transmissions. Allow breakers the opportunity to get in, and let the repeater's automatic timer reset itself. Don't be a "tail-biter."

7. There is no need to give the call letters of the repeater unless the automatic ID is inoperative.

8. If you are told that your signal is weak or spotty into the repeater and that you are difficult to copy, wait until you are in a better location before continuing to transmit. Do not burden the many listeners with the popping and scratching of an inadequate signal. Remember that it is possible to key the repeater without having sufficient signal strength for your audio to be understandable.

9. During the weekday commuter hours (0700-0830 and 1630-1800), refrain from rag-chewing on the repeater.

10. Refrain from using the repeater output frequency for direct conversation unless the repeater is off the air. You may be preventing a person near you from copying the repeater.

11. Don't be a button-pusher. There is no need to key the repeater to make sure your rig is working, and the additional operation shortens the life of the repeater as well as being annoying to stations monitoring the frequency.

12. Do not conduct yourself on the repeater in a manner likely to bring discredit to Amateur Radio or to risk citation by the FCC. Remember that many non-hams as well as wives and children of hams monitor the frequency.

13. Please cooperate with officers and directors in an attempt to encourage repeater users to join associations and share in the burden and responsibility of maintaining the repeater.

REGULATIONS FOR PHONE PATCH OPERATION, compiled by the Minuteman Repeater Assn. of Massachusetts

1. Identify prior to accessing the autopatch ("W1XYZ autopatch.").

2. Identify before completing autopatch ("W1XYZ clear autopatch.").

3. Refrain from using the autopatch during weekday commuter hours (0700-0830 and 1630-1800) except for emergency.

4. Do not disclose autopatch access code to non-members.

5. Do not interfere with another person's use of the autopatch, or join an autopatch conversation unless specifically invited.

6. Do not make autopatch calls from a home station or where a phone is readily available unless necessary.

7. Do not make continued attempts to access the autopatch if initially unsuccessful. Your

location may be bad or your system not functioning properly.

8. Business-related calls on the autopatch are forbidden by FCC regulations.

9. Inform the person called that you are speaking via a two-way radio. Avoid the embarrassment of having something broadcast that is private, personal or improper.

10. Long distance calls and using the operator are not possible on the Western Autopatch.

11. Reserve testing your touch-tone pad for hours of light repeater operation.

12. If you repeatedly get a wrong number, refrain from using the autopatch until you are in a better location.

13. Should you use the autopatch to assist in an emergency, keep a record of the event and notify the public service committee.

14. Wait until the person on the other end hangs up before you clear the autopatch, as touch-tone can be very loud in the car. This is especially important if you are talking with an operator (information).

Licensing

by Charlie Ellis, W6PNM

The Southern California Repeater Assn. held a meeting in conjunction with the Southwest Division ARRL convention on Oct. 21. The main topic of discussion was licensing.

Lew McCoy (W1ICP) of the ARRL staff was present and provided much updated information about the problems with the FCC and the slow processing of repeater applications.

It seems the FCC is backlogged not more than three years in applications. They have extended for an indefinite period the authority of operation for existing repeaters, and for this reason are giving priority to the processing of the applications of new repeaters which are not on the air under this extension.

At the meeting, Lew covered several points the ARRL wants to see changed. All of these stem from the so-called repeater docket. It is the opinion of many that the rules that came from this docket are good, and that most of the difficulties stem from "interpretations" of the rules by various FCC staff members.

The ARRL is familiar with the procedure to request the FCC to consider rule changes, but there are no procedures to change the staff members' "opinion and interpretation of the rules."

Many points of the rules will come under filings of the ARRL. The items to be considered shortly will be outlined and published in QST. The exact plan of attack has not been finalized--it may take the form of one or of several filings.

NEW REPEATER DIRECTORY

The latest ARRL Repeater Directory is a 35-page six-by-nine booklet which users will find very handy, particularly when planning to travel. Send a large stamped and self-addressed envelope with 24 cents postage to:

American Radio Relay League
225 Main Street
Newington, CT 06111

The Deep East Texas Amateur Radio Club, Lufkin, Texas, operates a repeater on .34-.94. Formerly WB5HND, now WR5ACF... de Dr. R. L. Kurth (W5IRP).

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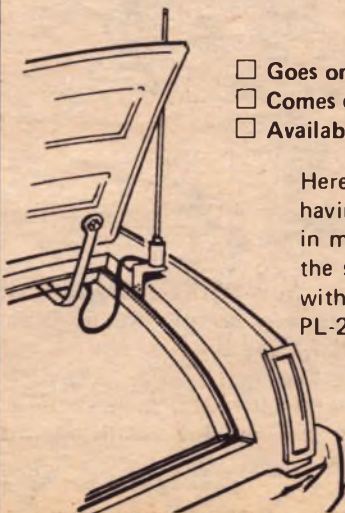
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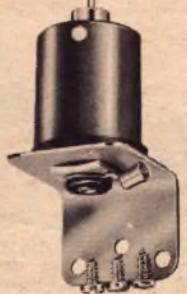
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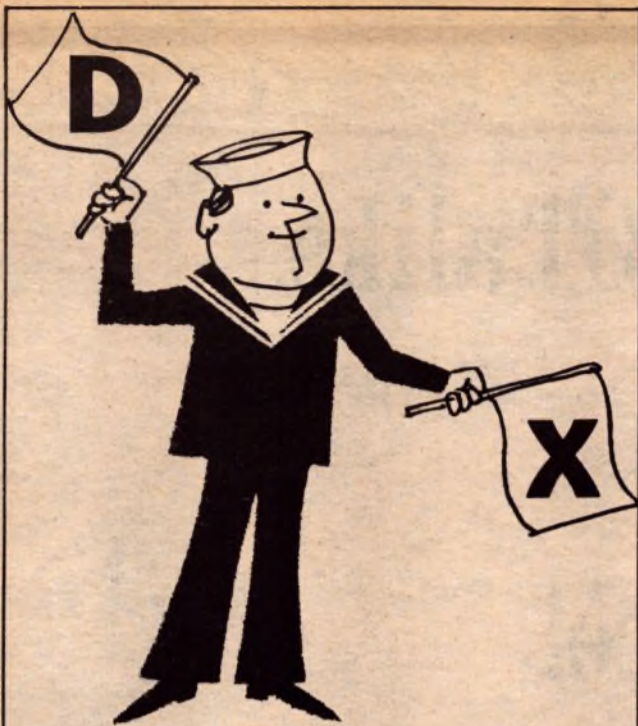
No-holes-to-show LARSEN TRUNK MOUNT



- Goes on in minutes.
- Comes complete with coax and easy to follow instructions.
- Available for either 2 meters or 450 MHz bands.

Here is the real answer for a mobile antenna without having to put a hole in your favorite Super-8. Mounts in minutes on the side of the trunk gutter. Gives you the same low V.S.W.R. and maximum performance as with roof mounting. Comes complete with coax, PL-259 plug with adapter, cutting chart, installation instructions and Allen wrench. Write and ask for further information and prices. Specify AMB-150-K for 2-meter use or AMB-440-K for UHF band.





A DXer's Nighttime Muse...
or, An Insomniac's Lament

by Alan Shawsmith, VK4SS

Lo! It is night and half the world's asleep
In bliss; but DX signals sweep
Through great spans of space to fall,
Like symphonies from a vasty music hall.

A thousand swinging keys' discordant bawl
Greet each stanza from a rare exotic call,
As Hams shout on in passionate ferment.
All this I hear, and listen in, content.

Straining ops perform with speed, "uptight"
To make their QSOs ere day's first light
Robs them of their sweet and global game,
To which the night gave sound and name.

The cock crows, and notes begin to fade
Into space's pre-dawn muted glade.
Like violins tucked away, the signals go,
And I sit alone... at the radio.

Bhutan

W6KNH and VU2KV plan to mount a Bhutan operation for four days from Dec. 28 and will sign A55KV.

Clyde Schoenfeld (W6KNH) will be on a world trip and will be in India next month, probably being in Calcutta for Christmas and in Bhutan for New Years. Venkat (VU2KV) made a short operation from Bhutan in May, 1972, conditions not being favorable for an extended stay and the operation left many needing Bhutan. The exact time for the operation to open will depend on the progress made through India and Nepal prior to going to Bhutan.

The operation will use both CW and SSB. Frequencies will be

SSB: 14195 kc, 21290 kc and 28600 kc; frequencies to be used on the lower bands will be decided after arrival and will be announced.

CW: 10 kc inside the lower edge of all high frequency and low frequency bands.

Gear will include a beam for the higher frequencies and a linear will be available for all bands.

QSLs will be handled by W6KNH. More details will be coming on this before Clyde and his XYL depart. This effort has been in the planning stage for some time and things are rather solid at this time.

(From "West Coast DX Bulletin")

St. Martin

Last month, John Irwin (K6SE/2) went south to French St. Martin to operate during the CQ WW Test, working with K2FJ in a combined operation, with K2FJ operating PJ8DX/PJ7 in Dutch Sint Maarten, the other part of the same island. John writes:

"Our suitcase Dxpediton was a qualified success with some troubles with equipment, site, antenna, health (fatigue), none of them deadly. If I had to do it again, I would take down in addition a four-element beam, an alarm clock and some insect repellent--not necessarily in that order.

"My Hy-Gain 18AVT/WB had its base one foot above the beach just outside of Room 6 at the Hotel Le Pirate in Marigot. I was working barefoot. PJ8DX/PJ7 had a relatively poor location for stateside with his signals down perhaps two to four S-units.

"We had a good run together on 28 mc Saturday in the contest. 28 mc was good for me with 532 QSOs Saturday and 830 (alone) Sunday. U. S. hams were splendidly cooperative. The worst feature was that a non-negligible percentage of them and especially the louder ones sounded as though they had been filtered through a nutmeg grater.

"The one-way skip was at times incredible. Stations barely readable were giving to me consistently 5/9 or 5/9-plus reports, even when they had ten times the power. It worked the other way, also, at times being extremely frustrating.

"We worked a considerable number of West Coast stations on 40 and 80, but the background QRN was high and there must have been plenty that I could not copy or hear. Conditions for the PACDXNET were poor. We gave some assistance to FGØZZ in raising his six-element beam--he was working pile-ups we couldn't even hear. These lads were old hands at contests and did a superb job, probably bringing French St. Martin down in rarity by 50 or more countries. Their operation location was at a spot 1,400 feet above sea level.

"A QSL card has been made out with W2MIG helping me for all 3,842 QSOs made with FGØAFA/FS7 from St. Martin, and these went into the mails on Nov. 7. About 500 QSLs with SASE were received in less than ten days after the contest. These were answered and the rest went via the bureaus.

"John Irwin"

(From "West Coast DX Bulletin")



DX Code

by Pete Hoover, W6APW

Our fellow inhabitants of the spectrum, the CBers, popularized the so-called "Ten Code," and what they missed, Jack Webb and/or Dragnet picked up (Oops, sorry about that). You know, "10-4," and all that.

Also, there are several VHF repeaters in the Los Angeles basin whose users seem to have a vocabulary that is almost entirely numerical.

DXers ARISE! Let's not be left out; let's establish our own verbal shorthand.

And let's not be bound by tradition. How about an Eight Code? For instance:

- 8-3 He shut down an hour ago; you can stop calling him now.
- 8-4 I hear you five-by-nine; I just don't want to talk to you.
- 8-5 You're beautiful when you're mad.
- 8-6 What do you expect? 'AOA only for a three-by-four.
- 8-7 Use a dummy load, stupid.
- 8-8 I give up. CU next pile-up.
- 8-19 Sorry 'bout that, Chief.
- 8-20 May the great Kahuna befoul your RF clipper.
- 8-21 Great Scott! Do you get paid by the word?
- 8-25 I hope they catch you.
- 8-28 Same to you, Fellow.
- 8-50 Bug off!!!
- 8-51 He's listening up to 10 kc, so quit calling him on this frequency, idiot.
- 8-54 He's working by call areas, so wait your turn, lid.
- 8-57 He's working from a list, so shut up, stupid.

There you are--anybody can play the game. Suggestions and/or additions eagerly sought, and will be presented if space and good taste permit.

(From "Bulletin," Southern California DXC)

QSL

Most eastern European countries are not able to take advantage of IRCs, SASEs or SAEs due to various restrictions. They therefore must QSL via the national society bureaus through necessity.

In order to offset this somewhat, U. S. A. QSL managers and A. R. C. QSL managers may elect to QSL in bulk to those countries in lieu of subscription outgoing QSL services.

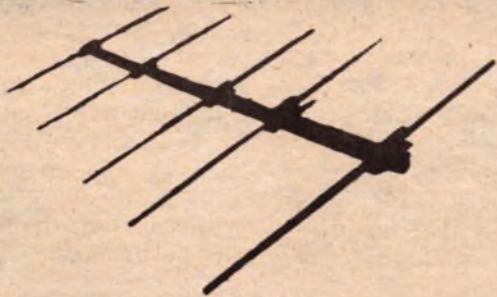
Cards for YO, LZ, HA, OK, DM, SP and U prefixes (ALL UA-UY types, including RA, RB and RD) may be shipped in bulk to

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SP5PWK
P. O. Box 298, 00-950
Warsaw, Poland

for further distribution.

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NEW IMPROVED WIDE SPACED 40, 20, 15 & 10 METER BEAMS

All W7GVA beam elements are constructed of the finest aluminum available, 6063T832 and 6061-T6 both top quality alloys.

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All our beams come complete with adjustable reactance tuned gamma match network which can handle 4 KW plus on CW and SSB.

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Model No.					
M340	3 ELE. 40 METER BEAM (full size)				\$420.00
		Boom length 38.5 ft. 3" OD .200 wall to .065. (w/re-enforcing kit)			\$498.75
M240	2 ELE. 40 METER BEAM (full size)				\$225.75
		Boom length 16 ft. 3" OD .065 wall. (w/re-enforcing kit)			\$278.25
M720	7 ELE. 20 METER BEAM				\$409.45
		Boom length 58.5 ft. 3" OD .200 wall to .065 wall. (w/re-enforcing kit)			\$431.55
M620	6 ELE. 20 METER BEAM				\$314.95
		Boom length 50 ft. 3" OD .200 wall to .065 wall. (w/re-enforcing kit)			\$333.90
M520	5 ELE. 20 METER BEAM				\$178.45
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		Boom length 30 ft. 3" OD .065 wall. (w/re-enforcing kit)			\$159.60
M320	3 ELE. 20 METER BEAM				\$ 99.95
		Boom length 20 ft. 3" OD .050 wall. (w/re-enforcing kit)			\$108.95
M715	7 ELE. 15 METER BEAM	—	—	Boom length 40 ft. 3" OD .065 wall	\$224.95
M615	6 ELE. 15 METER BEAM	—	—	Boom length 32 ft. 3" OD .065 wall	\$146.95
M415	4 ELE. 15 METER BEAM	—	—	Boom length 20 ft. 3" OD .065 wall	\$ 94.45
M810	8 ELE. 10 METER BEAM	—	—	Boom length 40 ft. 3" OD .065 wall	\$178.45
M510	5 ELE. 10 METER BEAM	—	—	Boom length 20 ft. 3" OD .065 wall	\$ 94.45

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		Boom length 40 ft. 3" OD .200 wall to .065 wall. w/re-enforcing kit)			\$460.95
DB54	5 ELE. 20 & 4 ELE. 15 INTERLACED BEAM				\$241.45
		Boom length 40 ft. 3"OD .065 wall. (w/re-enforcing kit)			\$257.25
DB43	4 ELE. 20 & 3 ELE. 15 INTERLACED BEAM				\$188.95
		Boom length 30 ft. 3"OD .065 wall. (w/re-enforcing kit)			\$201.60
DB32	3 ELE. 20 & 2 ELE. 15 INTERLACED BEAM				\$115.45
		Boom length 20 ft. 3" OD .050 wall. (w/re-enforcing kit)			\$124.95
DB76	7 ELE. 15 & 6 ELE. 10 INTERLACED BEAM				\$251.95
		Boom length 40 ft. 3" OD .065 wall.			
DB65	6 ELE. 15 & 5 ELE. 10 INTERLACED BEAM				\$230.95
		Boom length 32 ft. 3" OD .065 wall.			
DB44	4 ELE. 15 & 3 ELE. 10 INTERLACED BEAM				\$115.45
		Boom length 20 ft. 3" OD .065 wall			

NEW NOW AVAILABLE

DB67	7 ELE. 20 6 ELE. 15	\$551.25; (w/re-enforcing kit)	\$572.25
M52046	5 ELE. 20 on an extra heavy duty 46' boom. (includes re-enforced element)		\$288.75

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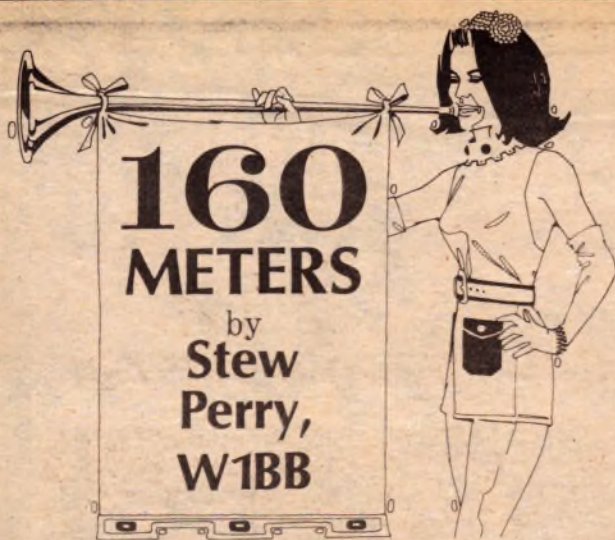
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All signs "GO" for what should be - according to George Jacobs, W3ASK, our propagation expert (See herein George's MAIL-A-PROP Service, \$20/yr.), and others - the start of two or three years of unusually GOOD "LF" Dx condx.

Although going into a bit of a slump the latter part of the summer, 160 was GOOD! The TransEQUATORIALS excellent! and the SEPT equinox path to VK/ZL open - many QSOs. W5RTQ wkd JA7NI! LAST season featured many new "FIRSTS", including a vy stupendous W7DZO to G3YUV. VE5XUs and W7DOL/6's w/ GM3YCB. A "Memorable" JAN opening! Greatest DX ever wkd on 160-JA7AO's w/ VP8KF, 18,000 Km JUL 9-any challengers? VQ9/Seychelles on. ELØN/mm MIKE active - Barbados SP6DR BEACON - The "First-Ever" W/VK-SSBx2 K5TFG/VK3QI - any otrs claim this? Best Ever CQ/WW/160 "Test"-VK3CZ sends fantastic logs -JA3SVG/mm roams Pacific QSO/SWLing. JA1MCU/21 (VK9) DXpedition tremendous success wkd W6/7-VP8KF - VK/ZL-KH many otrs + "Goodies" too many to mention. The 73/74 season started SEP 1-should be real GOOD! The TransATLANTIC path shud B opening well. ARRL + CQ 160 "Tests sked Dec 8-9 + JAN 26-27 respectively Usual ARRL/CQ ALL Bands DX TESTS Mar 16 17 + NOV 24-25 respectively - 160 shud B "Boiling"! The 41st annual series of Trans-ATLANTIC "Tests" held by "Popular Demand" -concensus being, they fulfill a real need for some, especially beginners - it is hoped OTs will cooperate/help newcomers! The 7 annual TransPACIFICs There'll be DXpeditions, many otr activities! (As USUAL-see herein). PY1RO w/ hv 160 sunrise "Beacon" operating! "LOCHNAW Castle" boys GM3IGW/a, Mike + Jim w/ B on JAN 26-27, their TENTH Yr. ZF1/Caymans-W4ZMQ et al expected Nov 21-25-- W2QD hopes activate 4U1ITU--Much FUN + Activity ahead all right! As usual much ant wk bn gg on this summer. W1BB tested W7DOL/6 loop, put up No2 SW BEVERAGE (No1 to NE). Tested RANDOM LWs 3'to10' high-believe they hv lot going for good 160 DX reception - would like comments - otrs experiences - VK6swl Gee Allen uses w/ excellent results - Noise vy low. W2IU + many otrs still burying RADIALS to hit "Pay-Dirt"! The regular "Every Sunday Morning" traditional DXing is most intriguing, producing DXwise many unexpected "Thrills and Spills".

41st Annual TransATLANTIC and WORLD-WIDE "Top-Band 160 METER 1973/74 DX TESTS: To be held SUNDAY mornings DEC 23rd, JAN 13th, FEB 10th, from 0500-0730 GMT. W/VEs on 1800-1807, DX 1825-1830 in the "DX-WINDOW". These TransATLANTIC DX "Tests", held since 1932, are symbolic and reminiscent of the original crossing of the ATLANTIC by Radio Signals of MARCONI, DELOZ, SCHNELL and GODLEY, 1901-1924, and are LOTS of FUN! The propagation information developed is adding a lot to the technique of communication on these low frequencies, and is a good addition to the fund of radio knowledge. With todays improved equipment "Crossings"

are easier, but there are still many "FIRSTS" to be made! The BEVERAGE antenna for receiving, originally used by Paul Godley in 1924, is increasingly being used again. Operation on 160 is a Great! change from operation on HF bands! One must be very alert for DX openings from most anywhere, over a DARKNESS path, especial at sunrise/sunset PEAKING times. These "TESTS" are especially helpful to "First-Timers", and the OTs are "Regulars" are requested to HELP them, and not usurp good condx for repeat QSOs etc, etc. They are TESTS and NOT CONTESTS - run for the pleasure of the operating activity, without competition. Dis-Continuance of these tests, because condx and crossings are easier than in the past years has been considered, but the "Concensus of opinion", is that they perform a useful service, and should be continued - see herein/later under EAST COAST/TRANSATLANTIC heading. Therefore they are being continued -- this is the 41st year of the "Tests" - CHEERS! Luck and reports to WIBB + Magazines.

7th ANNUAL TransPACIFIC 1973/1974 160 METER Dx TESTS: (Embracing the whole WESTERN Hemisphere!) To be held Saturday mornings DEC 22nd, JAN 12th, FEB 9th, from 1330-1600 GMT. W/VEs on 1800-1807, JAs 1907.5-1912.5, VKs 1800-1805 ALSO 1825-1830 in the "DX-WINDOW", ZLs 1875-85, all otrs 1800-1805. These "Tests" are conducted from 5:30 AM to 8:00 AM Saturday mornings, PACIFIC COAST time. This is 10:30 PM Saturday Evening, to 1 AM Sunday Morning, Japanese time. Similar to the TransATLANTIC Tests, they are set to embrace sunrise time at the EASTERN (W6) end of the path. LORAN is quite a problem but has been coped with quite well w/ selective receivers. The new DRAKE R4C noise blanker is EXCELLENT for LORAN. These tests were originated in 1967, after WIBB's visit to Japan and talks with the JA Hams in Tokyo, and their enthusiastic approach to 160! JAs and W/coast boys alike endorse these tests and enjoy them immensely. They are limited to one per month, so do not get monotonous. BOTH TransATLANTIC and TransPACIFIC "Tests" have been synchronized to occur on adjacent dates, and to keep away from CQ and ARRL 160 Contests. Luck, you WESTERN HEMISPHERE boys!

PROCEDURES--TransATLANTIC and also TransPACIFIC TESTS

CALLS: "CQ DX TEST", for first 2-1/2 Min of Alternate 5 Min Periods, listening between. W/VEs lead off FIRST 5 Min period, then alternate 5 Min Periods thereafter. DX follows, first 2-1/2 Min of second 5 Min Period, then alternate 5 Min periods. THUS, each CQs, 1/2 of their respective 5 Min period, listening for answers between, or to put it another way, each CQs, 2-1/2 Mins then listens 7-1/2 Minutes. (Reports to WIBB and Magazines).

TIMING: SET CLOCKS Accurately. THIS is IMPORTANT -- use WWV at 2.5, 5, 10 Mhz.

SCHEDULES: KEEP to the designated test periods ACCURATELY! unless in QSO -- THIS ALSO IMPORTANT!

BEACONS: "Beacon Stations" which are helpful in checking band CONDITIONS are: WWV/Denver, and WWVH/Hawaii 2500 kHz, KPH/Pacific Coast SF. 2045 kHz, WNU/Mid USA/Gulf Coast, 2048 kHz, WCC/East Coast/Cape Cod, 2036 kHz and DHJ/Europe/Germany, 1830 kHz.

EAST COAST-TransATLANTIC-Europe/Africa

5Z4KL/ANDRE (GM3VLB) QRT KENYA JUN 22 after EXCELLENT "TRICK" on 160! Almost made "WAC", needed Oceania only! On leaving he presented Silver Cup TROPHY to Radio Society Kenya - who tendered big 'farewell' dinner

to him - to be known as "KILO LIMA CUP "WAC" 160 METERS" to be awarded first 5Z4 to make WAC! A magnificent gesture! SALUDOS Andre! Left 150w Tx + 160m converted/40 w/5Z4JE a keen LF man who may get tt cup - look for him on 160! Nw in GM w/ 25 acres fr ants! BEST WISHES!

TRANSISTORIZED HOMEBREW RIG VFB ON 160 WA3PFQ/Joel's 60w Tx + simple "Regen" transistorized very sensitive Rx 6"x4"x2" wkd 11C inc LU5HFI W/dblt - also has topLOAD 60' vert w/13 radials. Not many 100% homebrew rigs on air today! GREAT!

BEVERAGE ANTENNA PHENOMENON NOTICED BY WIBB - Has any BEVERAGE user noticed same thing? While comparing Hor Vee Dbt Vs Beverage on Farm in Maine, receiving DHJ twilight at sunset, just after + 'Till dark - the resonant VEE Dbt ant much btr than BEVERAGE, seemed like BEV just didn't want to go to work at all. BUT! after dark the BEV "Perked-up", was MUCH btr than the HOR Dbt. Anyone hv explanation? Experienced same thing?

THE "MOSTEST" ON ONE PEAK? G3YRO/Roger w/genuine 10w wkd 23 TransATLANTICS on one peak, 18 FEB - anyone top this?

LOOKING SOUTH

THE 1973 TransEQUATORIAL TESTS Organized by Rolf/PYIDVG, Nw PYIRO, + Paddy/EI9J - went VFB! "Scads" new QSOs. ACTIVE: LU5HFI, EVM, 6EF-VP8KF-PYIDVG/RO-CX3BH, ZP9AY, CP1EU, ZD9BM, DL2GG, /YV5 for SA. For AFRICA 5Z4KL, 9J2LF, ZS6GE, ELØM/mm-YV4AGP. ASIA: EP2BQ, 4WIAE, JY9FOC, ZXØVG one QSO! Many W/VEs. Many Gs, Gms, EI, DL, OK, HB, CM, OE, OL, PAØ. Rolf Sez: Cndx super JUN/JUL, fair AUG - Stns shud avoid even harmonics of 5 kHz becuz SA BC harmonics - EU/SA open daily. Calling/listening procedure unnecessary. Late as 0200 often Gud! Bagged 5Z4 for C ne43! Was hrd by VK3CZ 239, path 5 degrees fm S pole. Hopes hv rhombic farm few yrs! PADDY/EI9J rpts: DX hrd/wkd every day, activity high-Cndx Gud-peak JUN 19/20/21-fine publicity Job by Rolf - JUN 19 best, W2IU/K2ANR wks EP2BQ EXCELLENT for mid-summ. I wkd 5Z4KL 39! EP2BQ, W/VEs - if VKs JUN, cud hv made WAC! - In Ev summer solstice favors N/S, winter favors EU/VK-CP1EU/excellent-CX3BH gud sig- LU5FI vy active/gud sig-ZP9AY MOST active and consistent SA/excellent sig and EARS! My QSOs fm my CQs- VP8KF/vfb- Hrd ZXØVG-Nil QSO - DL9KR not on WHY? WIBB/1-MAINE, same rst WIBB/1 Boston - ELØN/mm livend things up - VEIMX 'Most hrd/wkd NA stn' - CE7AA/JY9FOC No/show - cndx otr bands stinko- 160 shud be HOT 73/74 season. (Tnx a Mc Paddy!)



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FLdx-400	Transmitter	339.00	SP-101	Speaker	19.00
FRdx-400 SD	Receiver 6 and 2 meter included	399.00	FV-401	External VFO	99.00
FRdx-400 D	Receiver	299.00	SP-401P	Speaker/patch	59.00
FL-2000 B	Linear Amp with tubes	339.00	SP-401	Speaker	19.00
FL-2100	Linear Amp with tubes	339.00	YD-844	Dynamic microphone	29.00
FT-2 Auto	Auto-Scan 2 meter transceiver	379.00	XF-3C/30C	C.W. filter	40.00
FT-2FB	2 Meter mobile transceiver	239.00	FA-9	Fan	19.00
YC-355D	Digital Counter	289.00	MMB-1	Mobile bracket	9.00
FTV-650	Transverter	149.00	MIR-1	Modification kit for FT101	40.00



by "Doc" Gmelin, W6ZRJ

Amateur Radio is an avocation for individuals, since we participate most often by operating our own radio stations.

But one of our greatest potentials for the preservation and advancement of ham radio is the local radio club. Many amateurs do not belong to a local club for one reason or another, but when amateur radio is attacked by outside interests, our best local defense is most often provided by a well-attended radio club.

Do you participate in your local club? How strong is your local club? Is your local club connected with the local Red Cross or CD organization? How good is your local public relations through your local radio club? These are important questions about any local club.

If your club is weak in any of these areas, how about taking a part to advance these important areas of amateur radio? The local radio club can be our strongest local defense against attacks regarding antenna height restrictions and other local ordinances that affect amateur operation.

Please join your local club if you are not now a member.

Does your club run licensing classes? A couple of good reasons for doing so are given in "QRZ," published by the Pilot Knob Amateur Radio Club, of Leavenworth, Kansas.

One advantage, "QRZ" said, "of holding novice classes this year will be increased membership and, therefore, more dues, which results in a bigger treasury. It will also increase the strength of Amateur Radio..."

"Remember, the continued success of (your) club may be based on the success of (your) novice classes."

The club in Leavenworth does something novel - it holds two meetings each month. The business meeting is held on the first Thursday of the month; the gathering on the third Thursday is a social program meeting, with no business conducted. The club also periodically sends copies of QRZ to all known amateurs in their area--along with an invitation to join the club, attend meetings, and "help us build the image of Amateur Radio in the Leavenworth County area."

W5AC, the Texas A and M MSC Radio Committee, will sponsor the winter meeting of the Texas VHF Society over the weekend of Feb. 23-24, 1974.

Saturday there will be a flea market for those that would like to bring their extra gear to sell, swap or give away. Table space will be available.

There will be a transmitter hunt Saturday night, and maps of Brazos Co. will be provided for all who take part. There will also be a hospitality room set up.

The main meeting, with guest speakers, will be Sunday.

For more information, write to

W5AC
MSC Radio Committee
Texas A and M University
College Station, TX 77843

Our club meets every other Thursday night, 7:30 p. m. in Room 216 at the MSC. The station is a Collins S line into a Henry 2K with a TH 6 DXX at 100 feet. We are now working into Oscar 6 and as of Nov. 1 have worked 14 stations and eight states.

We are going to sponsor a contest. Stations are to work as many college and university clubs as possible.

We also have a 22/82 repeater open to anyone. Receiver antenna is at 260 feet, transmitter antenna at 200.

We have members from TG and G at present. We plan on holding code and theory classes at the Texas A and M Free University this spring. Our club dates back to about 1909. We were the first radio station to broadcast a college football game in the United States.

Charles F. "Frosty" Frost, K5LBU/5

by Charlie Ellis, W6PNM

The Ventura, Calif., Coastal AREC provided communications to coordinate the start of the Ventura County Fair Parade.

The use of hand-held portables at the staging area on 146.94 MHz provided the communications required to get all the parade units from the various forming areas into the parade route in the correct sequence.

Stations involved in this operation were WB6TNL, WA6OBT, WA6MNA, W6PNM, WB6EAN, WA6UEO, WB6FLI, K6YLQ, WA6WAL and WB6NNP.

Amateur Radio and the AREC received good publicity from this exercise and the parade chairman and the fair manager were quoted as saying, "Without the hams, the parade wouldn't have gotten under way."

conventions

GREATEST of them all! That's the ARRL 1974 National Convention, sponsored by Hudson Amateur Radio Council. Remember the dates-- July 19, 20, 21 at the Waldorf-Astoria, New York City. Three days of exciting events! Wide array of demonstrators, exhibits and forums featuring latest in FM, SSTV, ATV, FAX, RTTY, Satellites, Antenna design, Transistors, Integrated Circuits, DX, MARS, ARPSC and much more. Something to do every exciting minute for YLs and XYLs--Tours, New York sightseeing, visits to popular TV shows, Parties, Fashion Shows. Meet the ARRL President, Vice-presidents, and all 16 Directors! Famous-name Speakers as Saturday Night Banquet! Everything for the Non-Ham, New Ham and Old Timer. For Info, Contact: ARRL Convention, 303 Tenafly Road, Englewood, N. J. 07631.

DAYTON HAMVENTION expands to three days April 26, 27, 28, 1974 at HARA ARENA and Exhibition Center. Brochures mailed March 15th. Write for information if you have not attended the last two years. P. O. Box 44, Dayton, Ohio 45401.

Look Out!

(Editor's Note-- This is a true story as related by "Doc" Sam Rosen (WA2RAU) of New Rochelle, NY, in issue No. 283 of the DX'ERS MAGAZINE. You should know good ole "Doc" and his friendly voice so familiar to me on 20 meters to appreciate how he could manage to get himself into such a predicament. This is how "Doc" tells it.)

On a cold, snowy, blustery Saturday afternoon in midwinter a few years back, I returned home from my office. My three-element optimum spaced 20-meter beam is perched atop my heavy-duty free standing Tri-ex tower next to, and in back of, my home. I've always lowered it to 25 feet when I leave home and raise it to 70 feet when operating. The tower can be raised by remote control from inside the shack.

On this particular day I raised my tower from the shack to its full operating height--or almost. I heard a loud crunching sound and my XYL rushed down to the shack and screamed, "Sam, I think a plane just crashed on top of our roof."

When I rushed outside, the sight that met my eyes crushed me to the core. The RG-17AU cable had been blown under the eave of my roof and I had lifted the entire corner of my roof about eight inches from its base. From my upstairs room, I could see the sky and snow was falling into the bedroom.

Attempts to lower the tower were unsuccessful because the elevating cable had been sheared off, the rotating cable was torn, the RG-17AU was stripped bare in some sections and both the telephone and Con Ed lines had been torn loose from the roof-mounting insulators. The damage was so extensive that I had to decide first where repairs should start.

First, I engaged someone to climb the tower and at 70 feet in almost zero weather, repair and replace the cables and replace the coax. Next, a carpenter had to push down the elevated corner of the roof and secure it where it belonged. Then a roofer and a tinsmith replaced shingles and gutters, an electrician to join severed power lines and finally a telephone repair crew to take care of the cut telephone lines.

My XYL only looked reproachfully at me when conditions were back to normal and said in a subdued voice, "Sam, is ham radio really worth all this heartache?"

(From the St. Paul, MN, "Ground Wave")

MARS

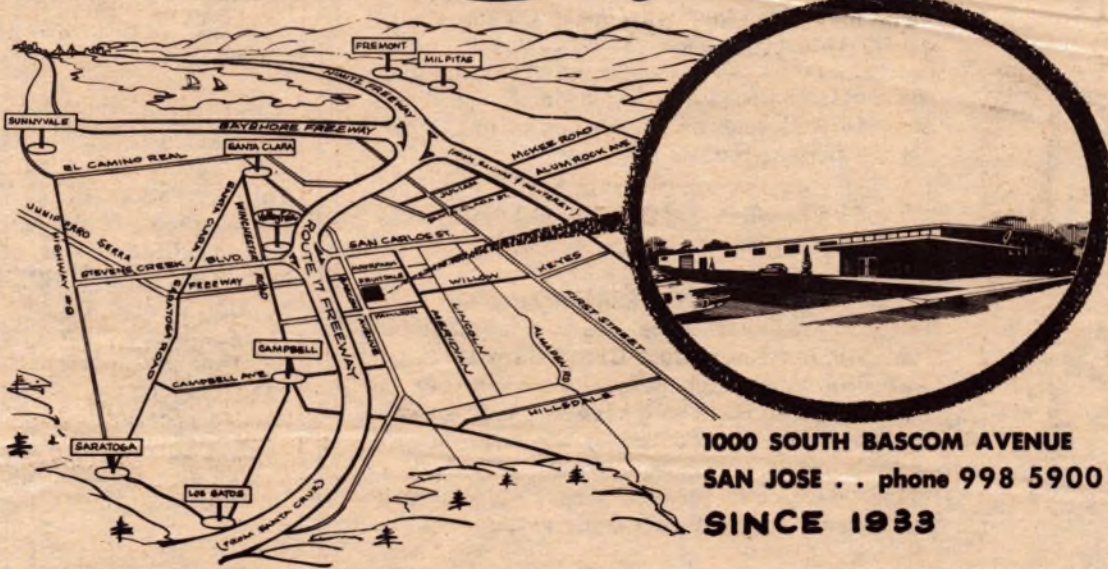
Christmas is coming, and for the sixth consecutive holiday season the American Federation of Musicians will be cooperating with the nation's hams and picking up the cost of part --PART--of calls home made by GIs overseas.

Hal C. Davis, president of the 315,000-member AFL-CIO affiliate, said the union will not pay for calls home by servicemen and women made entirely via telephone circuits, but will pick up the stateside tab for patched calls made with the help of a Military Affiliate Radio System (MARS) connection.

Military personnel must arrange for a specific time for their calls home on Dec. 24, 25 and 26 with their local MARS station, Davis said.

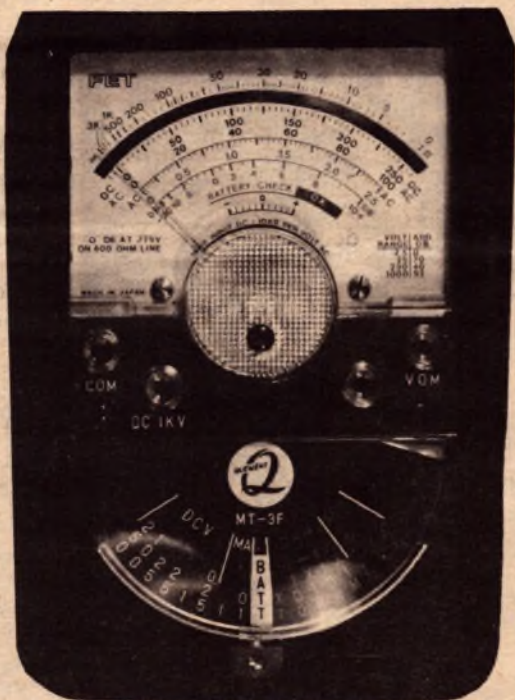
Amateur Radio operators working with MARS are urged to remind the overseas operators of the free calls, and to tell them to make sure the troops get the word.

All roads lead to Quement Electronics



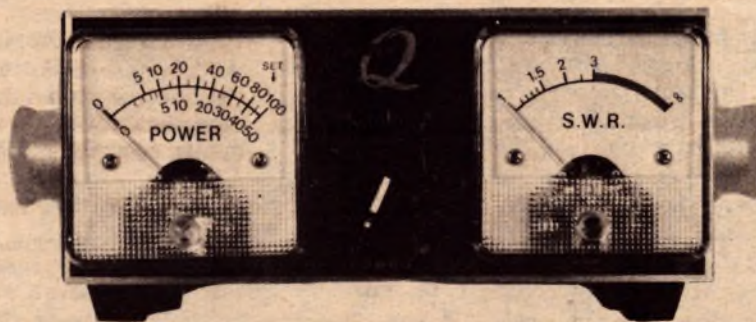
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RHODESIA

by Ken Millar, ZE7JV
Cranborne, Rhodesia

I recently bought a TenTec Argonaut transceiver as a result of an advert in "Worldradio" and I must say that I am very pleased with it. In the past ten weeks (the time I have had it) I have worked 66 countries, including some fairly rare ones over long distances. This past weekend, over the DX contest, I picked up XU1AA, FGØZZ (St. Martin) and 9VIRR, also VK6AB and 5U7AZ to bring me up to the 66 country total with five watts p. e. p. on SSB using a Mosley TA33 at 40 feet. Not bad, eh? I've also worked 30 states. When I have worked the 100 countries I am aiming for, I intend to write an article about QRP working.

My most exciting experiences with the five watt rig have been:

Sept. 3 at 0615Z, I tuned across and heard YJ8BL coming in with a 5/9-plus signal. He was working West Coast U. S. and Canadian stations, so I gave him a call with the five watt rig and, amongst the pile-up, he heard me say, "Africa," so he told everyone to stand by while he picked me up. He had to ask twice for stations to stop calling him, so he could get me in the clear, and on the third attempt he heard me clearly and gave me 5/3... Bob was astonished when he heard me say I was running five watts p. e. p. My beam heading was right across North America.

On Oct. 3, I checked into the Africana net on 2L 355 with the Argonaut, and in less than two hours I had worked 37 stations from all ten call areas. After the net closed, I went on to work 9GLAR and KP4BCL to give me two more countries.

So, as you can see, my tiny five watt rig is doing really well, and I am getting a lot of fun from it.

I have had one Argonaut to Argonaut QSO. This was with WA4BFY on Sept. 14, and he was using a vertical antenna... quite an achievement, and on SSB, 2L 355 MHz. My report to him was 4/4 and he gave me a 5/5... and this QSO was QRP throughout, unaided by higher power.

I should point out that ALL my QRP QSOs have been unaided... and from start to finish have been QRP. I mention this, as some QRP operators have been known to establish a QSO with high power, then ask the station being worked to listen for the QRP rig--which is the easy way. I have never yet done this; every single one of my QRP QSOs has been started with the QRP rig competing for QSOs with high-powered stations.

I am sure you will agree that it is surprising what can be done with low power. Certainly my hopes for the Argonaut have been fulfilled, and it is very reassuring to know that in an emergency, if necessary, I can get on the air, and know that I can get out even on dry batteries. I would like to use it mobile, but have no suitable mobile antenna, and also for mobile I would like to obtain the solid state 50 watt linear that TenTec offers to offset the poorer mobile antenna.

CLEVELAND-- "CQ-QRP, CQ-QRP, this is WA8RSF, Ohio, calling."

Tony Emanuele (WA8RSF) of Eastlake, Ohio, enjoys challenges. He is a member of the QRP Amateur Radio Club International, whose membership totals 4,000 operators. They are dedicated to increasing enjoyment of their hobby by voluntarily limiting power in their transmitting equipment. QRP indicates "decreased power." The club's motto is "Power is no substitute for skill."

Emanuele explained, "Our aim is twofold: to accommodate hams in other countries, who have low power restrictions, and to limit the amount of transmitter power necessary to carry out desired communications.

"Ours is a voluntary honor system," he said. "Full club membership in QRP International limits transmitter power a maximum of 100 watts, except when engaged in public service activities or emergencies."

Operators who exceed the maximum power may hold associate membership by sharing their QRP activities via the club's newsletter, issued quarterly. Associate members may not hold office or vote on club matters. All memberships are for life, unless deliberately cancelled. First year's membership includes a free subscription to the club newsletter, QRP.

Emanuele said, "Believe it or not, we have QRP members who operate with five or less watts. Proof of this may be found in the "Milliwatt" bulletin published by Adien Weiss (K8EEG), Alliance, Ohio."

QRP International sponsors a QSL bureau, which forwards calling cards to hams who have contacted one another.

The club issues six contest awards to all ham operators who have decreased transmitter power while in contact with their QRP members around the world.

Short wave listeners (SWLs) are not eligible for club membership, but they may apply for SWL awards on a basis of hearing QRP transmitters.

"Newcomers are encouraged to join our informal QSO parties," Emanuele said. "They are on the first Sunday of every month, from 1500 GMT to 0300 GMT. The frequencies are 14,065 kHz, 20 meters; 7040 kHz on 40 meters; 3540 kHz on the 75 meter band.

New members will receive a welcome package containing all club information when they write to Robert Jensk (K7ZVA), secretary, 11714 Masonic Rd. SW, Tacoma, Wash. 98498.

Emanuele majors in electrical engineering at Cleveland State University. His low power equipment consists of Halicrafters HT-37, SX-117 and Ten Tec PM-3.

"I worked New Jersey with my three-watt, home-brewed equipment, and made 110 contacts during Field Day with my two-watt transmitter," Emanuele said. "I will be glad to talk about QRP activities before any of this area's ham radio clubs."

by Eunice G. Bernon, K8ONA
(From the Cleveland, Ohio, "Plain Dealer")

TRAFFIC (Continued from page 34.)

in to these nets from anywhere in the country... an excellent opportunity for you morning operators to get some traffic handling experience.

Hal Moore (W6DEF) advises that the Northern California Net meets on 3630 kHz daily at 0300Z and 0430Z (1900 and 2130 local PST). This net is part of the National Traffic System and as such has the first session to send outgoing traffic and the second session to receive incoming traffic. Hal notes that the second session is also a slow speed training session, an excellent opportunity to learn how to send a message and learn net procedures, since everyone knows it is a training net. It is anxious to receive newcomers. The net manager is Bob Travis (W6BVB) in Palo Alto, Calif. Drop Bob a line for info and check into the Northern California Net.

The weekend of Oct. 21 afforded us the opportunity to attend the ARRL Southwestern Division convention in Hollywood and visit with many of the traffic handling friends we work often on the nets. A meeting of the Southern California Net was held at the home of Theodore Sharp (K6UYK) in Hollywood with approximately 25 in attendance. The present net manager is Don Fletcher (W6LYY) from Manhattan Beach, who would be happy to hear from anyone interested in joining the net. Among those in attendance were Gordon Wenz (W6BGF), past PAS chairman, Eugene Violino (W6INH) and Darrell Gagnon (WA6DEI), SCMs, Arthur Smith (W6INI) of the ARRL Emergency Communications Advisory Committee, Don Fletcher, Larry Tyree (WB6ZVC), assistant Southern California Net manager, our host who is SCNN manager, Alan Brubaker (K6QPH), the RM, Robert Tauxe (W6JTA), past SEC, Richard Norton (W6DGH), Earl Weaver (W6JPH), Donald Jenkins (WB6PGK), Robert Simon (W6ISC), Kevin Berasley (WB6OYN), Frank Erbacher (WA6FIB), and many pretty XYLs.

Also in conjunction with the convention was an Amateur Radio Public Service Corps breakfast meeting hosted by Gene Violino, the SCM from Los Angeles. All the SCMs from the Southwestern Division were in attendance along with Division Director John Griggs (W6KW) and Vice Director Arnold Dahlman (W6UEI). A good discussion on the NTS role in the ARPSC and a review of the new DNTS by past Pacific Area Staff Chairman Gordon Wenz were highlights of the meeting. If you don't have a traffic breakfast at your area conventions, you should consider it. After the good fellowship over breakfast, many of your local net problems can be worked out. It is great to fellowship with the fellows and ladies you run traffic skeds with each week of the year.



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People Helping People - By Sister Mary, WA5VBM



Fourteen-year-old Bill Zack (WB2HDK) has been IMRA Net Control Station every Thursday night for the past two years. Bill first became interested in the IMRA when he heard a local ham, Joe Agostinelli (WB2ERC) net controlling the IMRA Traffic Net. Later, he met Joe at one of the Rochester A. R. C. meetings and he got more information about IMRA. Bill became a regular check-in and began filling in as Net Control Station when Joe needed a substitute. He caught on quickly and showed poise beyond his years (13 at the time).

Bill was born in Rochester, N. Y., in 1958. He attends McQuaid Jesuit High School in Rochester, where he has been on the dean's list for the past two years, holding First Honors (an A student, with an average above 90).

Bill is the son of Stan and Elaine Zack. Stan, whose call sign is WB2PSA, is assistant director of pharmacy at Genesee Hospital in Rochester. Bill is of German, Russian and Polish extraction. He has blue eyes and brown hair; stands 5-1 and is growing. Hi!

It was when his dad became interested in Amateur Radio that Bill also became aware of his attraction toward the air waves. Bill was just eight years old and by the time he was nine he felt ready to take the novice exam--which he and his father took together. In quick succession, both got their general licenses in October, 1970, and their advanced tickets in July, 1972. Bill should have his Extra Class license by the time you read this--he took the exam in November.

Bill and Stan share their shack. The station consists of a Swan 270-B, external VFO, Heath Linear HA-10 (Warrior), Waters phone patch, and various and sundry other goodies. Father and son have a Classic 36 beam antenna up 45 feet and they put out a potent signal.

Hunting, fishing, playing chess, collecting stamps, camping out, and a "Brittany Spaniel" named Vicky are some of Bill's other hobbies. He and his dad are also very interested in Slow Scan Television. They have been building and overhauling SSTV equipment in their spare time and hope to have something going soon.

Carol Ann Gawle (WAILGU) has diversified her interests beyond ham radio. She now has her own darkroom and is brewing up some real good pictures. Her latest triumph was two photos of a tangled wreck which she sold for "cash money" to the Daily Hampshire Gazette. She is also president of the Easthampton Community Theatre Association, just to fill in her spare time, and they are doing Agatha Christie's "Mousetrap," and "The Barretts of

Wimpole Street." At night, Carol Ann and family have been moon-watching and Jupiter watching. Amateur Radio, theater, photography and astronomy... nice combination.

Syl Connolly (WIMD) and several members of IMRA out on a good show for the participants at the New England Division ARRL Convention. The IMRA booth was a real eye catcher. Brother Bernard (WA2IPM) brought a cassette table-top movie projector and drew the crowds to the booth with several mission movies.

Father Dan Linehan (WIHWK) and Father Joe Kowalczyk (OA7CF) concelebrated at the mass for the conventioneers. ARRL President Harry Dannals (W2TUK) was present for the mass where Father Joe gave an Amateur Radio-oriented homily. Hope to print excerpts from the homily--next month.

Willy Muldoon (K1EUD) and his XYL, Lena, came over from Hampton, N. H., to lend a hand in the IMRA booth. Rumor has it that Lena will soon be taking over the duties of membership chairman.

Father John Henault, OMI (HH9OF), was one of the visitors at the IMRA booth and made known his need for transceivers and/or receivers which will operate on the 80 meter frequency of 3.700 MHz. This frequency has been designated for their activities.

Brother Robert Kreutzer (W8GYR) is being transferred from Canton, Ohio, to the Chicago area. As of Sept. 28, Brother Robert became W8GYR/9. Hope he is able to get on the air from Chicago--we sure need a regular check-in from there.

Walt Hulsebusch (K8HBH) spent a month in Minnesota. He goes to his cabin in Brainerd, where he spends his time fishing and telling tall tales. His latest fish story is about the fellow who caught a fish soooo big that even the photo negative weighed ten pounds!

Cy Harrell (WB8DHW) hasn't been checking in too much lately. His sister, Dorothy, was ill for quite some time and Cy and his wife Ginny were devoting all their time to taking care of her. Dorothy passed away in mid-September. Rest in Peace.

Father John Parthum (YN4JPR), formerly stationed at Bluefields, Nicaragua, is now in Detroit, Mich. He writes: "Just a note to say 'Hello.' I've managed to pick up the IMRA at 2 p. m. EDT here in Detroit. I'm using a general coverage receiver which just gets the net. Nice to hear the voices again. I hope to try for my Novice License while I am up here."

Father Aidan Schaefer (W8BPQ) spent two weeks in Maryland and Washington, D. C. It was his first trip east, and he saw most of Maryland and Virginia. Also visited Tex Barabite (W3FUS) and met Father James Coffey.

Father Jude Bradley, OSB (WA2YNO), had a severe heart attack in September. He was in intensive care at Newton Memorial Hospital for several weeks. He is still very weak and needs much rest, but he is progressing nicely. Brother Joe (WB2WNZ) has been keeping the members informed with daily medical bulletins on Father Jude's health and welfare.

Civil Defense

by W. T. Thompson, WØNYG

On Oct. 17, five members of the Pilot Knob Amateur Radio Club of Leavenworth, Kans., participated in a Civil Defense simulated disaster exercise.

Under direction of County RACES Radio Officer Mike Baustain (WAØKQQ), operators were assigned to each of the hospitals in the Leavenworth area. Operation was on two-meter FM simplex. Dr. Thomas Storm (WAØYJL) manned the station at the army's Munson General Hospital (where, for most of the exercise, the army could not get its own radio equipment operating). Cecil Fox (WØMA) manned the station at Cushing General Hospital, Sister Mary H. Eberwein (WAØVJH) covered St. John's Hospital, Bill Thompson (WØNYG) covered the Veterans Administration Center, while Mike operated mobile from the "disaster" site, a fictional tornado-devastated area.

"Victims" were members of the Leavenworth High School Army R. O. T. C. unit, vividly made up to appear to have the most grisly of wounds. They were evacuated by army helicopters from Ft. Leavenworth, and by a U. S. Coast Guard van-ambulance, several ambulances of the Leavenworth Ambulance Service, by military ambulances and by private vehicles.

Mike worked with the dispatcher at the scene and reported the departure of each vehicle bearing "victims," the number of stretcher cases and the number of ambulatory patients, which hospital they were dispatched to, and their ETA.

A post-exercise review brought out several points:

1. It is real nice to have several days advance notice of an impending "disaster" to get antennas set up at the hospitals, but in actual situations, this won't be the case. Recommended action is installation of permanent antennas with coax lead-ins at each hospital.

2. The designated frequency for RACES here is 146.94, which also happens to be a very strong Kansas City repeater frequency. At the time of day of this activity, it did not cause too much problem, but could make our communications nil. Needed is a different RACES simplex frequency.

3. A verbal description of the various victim-bearing vehicles was cumbersome and inadequate. Each should be assigned a number designation, and that number could also serve as a communications message number.

Overall, it was a very worthwhile learning experience. Civil Defense director is Ed Powers, a department head at the Veterans Administration Center in Leavenworth.

BE PREPARED for emergencies with the SST T-1 Random Wire Antenna Tuner. Also great for Field Day, camping trips, and home operation. Toroid inductor for compact size: 4x4-1/2x2-5/8. \$18.95 PP. 90 day guarantee. See large ad this issue. SST Electronics, Box 1, Lawndale, Calif., 90260.

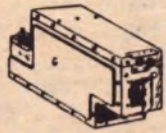


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Excellent Used..... **\$19.50**
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Brand New in Original Carton.... **\$23.50**
MD-7 MODULATOR with tubes,
Excellent Used **\$10.50**
Set of Plugs for MD-7..... \$ 8.50



BC-659 FM TRANSMITTER/RECEIVER

27 to 38.9 Mhz. Crystal control on any two
preset channels: 80 channels. Uses FT-243
crystal. Range up to 5 miles. Complete
with 13 tubes, speaker and meter.
Like New **\$27.50**
Vibrator power supply for above, 6, 12 or
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Makes fine Ham transmitter for 80, 40, 20 and
10 meters. Power output 100 watts on AM, CW,
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Accessories Available: Prices Upon Request



BC-603 FM RECEIVER

Converted for 35-50 Mhz. 10 preset pushbutton
channels or manual tuning. Complete
with 10 tubes, checked out, like new **\$39.50**
AC Power Supply, New..... \$14.95
DM-34 12V Power Supply, New..... \$ 4.45
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Technical Manual \$ 2.50
Set of 10 tubes for BC-603 Receiver.. \$ 5.95



BB-208/AMT BATTERY PACK contains three BB52 36V miniature lead
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PE-219 BATTERY CHARGER charges one or two 6V batteries at 7 amps
from 6/12 or 24V source. NEW..... \$5.95

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Fine general purpose Navy unit 125 to 20,000
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tubes, crystal, calibration book.
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STANDARD MAKE
ALL NEW
IN ORIGINAL
CARTON

3AP1* .. 2.95
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SHIELDS FOR ABOVE
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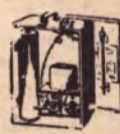
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UHF Cavity Resonator, 234-256
Megacycles.
Special Buy! **\$4.25**
Fully wired, includes two 955 acorn
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signal generator! Tuning wrench,
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Size: 9 1/2 x 6 1/2 x 6 1/2".



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Quart bottle of Willard
Battery Acid, 1280
specific gravity, for
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All mixed, ready for
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Quart Bottle, each..... **\$1.25**
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INPUT: 6 VDC 3.6 Amps.
OUTPUT: 250 VDC .030 Amp.
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DeJUR-AMSCO
2" Meter
0-30 V Scale
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Flush mounting.
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DC AMMETER
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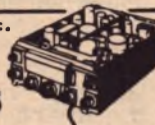
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Locates any metal buried approx. 2-ft in the
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buried metal mass. 64-page technical manual
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OUR SPECIAL PRICE **\$44.50**



BC-645 TRANSCEIVER

15 tubes, 435 to 500 Mc.
Easily adapted for 2 way voice or code on Ham,
Mobile, Television Experimental, and Citizens
Bands. With tubes, less power supply
in factory carton, BRAND NEW..... **\$16.95**

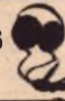


TRANSMITTER has 4 tubes: WE-316A, 2-6F6, 7F7
RECEIVER has 11 tubes: 2-955, 4-7H7, 2-7E6, 3-7F7
RECEIVER I.F.: 40 Megacycles
SIZE: 10-1/2" x 13-1/2" x 4-1/2". Shpg wt 25 lbs.

SPECIAL PACKAGE OFFER: BC-645 Transceiver, Dynamotor and all
accessories, including mounting, UHF Antenna Assemblies, control box,
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Brand New **\$26.95**

HEADSET

Low impedance. With large chamois ear cushions.
4-ft cord and plug. Reg. \$12.50. Our Special Price **\$2.95**
Less ear cushions..... \$1.95
High impedance adaptor for above... \$.69



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FREQ. RANGE RECEIVERS.	Type	Exc. Used	Like New	BRAND NEW
190 - 550 Kc	BC-453	\$16.95	\$23.50	--
6 - 9.1 Mc	BC-455	\$16.95	--	--
1.5 - 3 Mc	R-25	--	\$21.50	--
TRANSMITTERS. Complete with Tubes				
4 - 5.3 Mc	BC-457	\$8.95	\$11.95	--
5.3 - 7 Mc	BC-458	\$8.95	\$11.95	--

TG-34A CODE KEYS

self-contained, automatic,
reproduces code practice signals from paper tape.
5 to 12 WPM Built-in speaker. Brand new with tech
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Code practice tapes for above P.U.R.



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Aircraft Beacon Re-
ceiver 200 to 400 Kc. Operates from 24V DC 1.5A.
Continuous tuning, vol control, on-off switch and
phone jack. Very sensitive. Compact.
Complete with tubes, NEW..... **\$12.50**



BC-604 FM TRANSMITTER

20 to 27.9 Mc.
Output approx 30 watts. 10 crystal controlled
channels. Complete with tubes.
NEW..... **\$12.50**



ARC-R11A Modern Q-3 Receiver 190 - 550 KHz **\$10.95**
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R-4/ARR-2 Receiver 234-258 Mhz, 11 tubes, NEW **\$8.95**

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TELEPHONE HANDSET, W.E. type..... LIKE NEW \$2.95
SCR-522 TRANSMITTER-RECEIVER, with 18 tubes, LIKE NEW \$32.50

AM-300/AIC PUSH-PULL AMPLIFIER

4-tube PP power amplifier with dynamotor, works on
28 VDC. Automatic gain control.
Shpg wt 15 lbs. LIKE NEW..... **\$3.95**



DUAL AMPLIFIER

has two input circuits each
feeding a single 6SN7GT twin triode amplifier.
Complete with 115V 60 cy. power supply
using 6X5GT rectifier. NEW..... **\$5.95**



TG-5B TELEGRAPH SET

for code commu-
nications or code practice. Portable, with hinged
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art. Ball call system, 1000 cycle howler, key,
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Size 5-1/2x5-1/2x10". NEW..... **\$8.95**



TELEPHONE TYPE RELAY

Made by J.H. Bunnell, has adjustable
sensitivity. 150 ohm coil. NEW..... **\$3.45**



T-17 MICROPHONE
The aristocrat of car-
bon mikes. 50-ohm.
Has handy molded-in
hook to hang it up.
Press-to-talk switch
on side makes mike
circuit before control
circuit. Latest model.
Weight 2 lbs.
NEW..... **\$8.50**
Exc. Used..... \$4.95



**CARTER
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INPUT: 5.9 VDC 32 Amps.
OUTPUT 405 VDC .270 Amps.
Built-in hash filter

T-45 IIP MICROPHONE
Carbon type 100 ohm, 50 db below
1 millivolt, flat response, with
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HS-33 HEADSET

low impedance, 600 ohms, flat
response 200 to 4000 cps. Com-
plete with 18" side mounted cord
with PL-354 plug less cushions.
NEW..... \$5.45
Used..... \$3.25



HS-23 HEADSET
The standard high
impedance magnetic
headset. Uses R14
units (4000 ohms
each). HB-7 leather-covered ad-
justable headband, and quick-dis-
connect black PL-54 ball-out plug.
This is the resonant magnetic (un-
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extra desirable for MCW, but also
very clear on speech.
NEW, less cushions..... **\$4.75**
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MC-162A Flat type for HS-23, HS-
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NEW..... Pair **50¢**

LARGE SPONGE RUBBER Ear-
phone cushions for 2 1/2" elements.
NEW..... Pair **29¢**

AN/APR - 4Y FM & AM RECEIVER "F8" for Satellite Tracking!

High precision lab instrument, for monitoring and
measuring frequency and relative signal strength,
38 to 4000 Mc. in 5 tuning ranges. For 110 v 60 cy-
cle AC. Built-in power supply. Original circuit
diagram included. Checked out, **\$88.50**
Perfect. LIKE NEW.....
All tuning units available for above. P.U.R.



R48/TRC-8 UHF FM RECEIVER

230 to 250 Mc. Variable
tuning, one band. 115/230 V 60 cy. Complete with speaker, phone
jack, squelch circuit 2-1/2" meter for circuit test-
ing; includes 15 tubes: 8/6AG7, 9002, 5U4, 6V6,
VR-150, 6N7, 6SN7, 6AL7. Size 20 x 19 x 16".
Weight 75 lbs.
NEW..... **\$34.50**



B-10A TRANSVERTER

28V DC
Made by Aircraft Radio Corp. Couples UHF Ant-
enna to VHF transmitter and VHF receiver. Uses
6 tubes: 4/5763 and 2/6201. Includes 8 crystals
ranging from 233.8 Mc to 257.8 Mc. Size: 11x
4-1/2x4-5/8". Wt 5-1/2 lbs.
LIKE NEW, with tubes and crystals..... **\$9.95**



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Made by Aircraft Radio Corp, works on 28 V, in-
cludes 4 tubes: 2/12AW6, 12AX7, 12AT7. Size:
6-1/2x4-1/2x4-5/8".
LIKE NEW..... **\$6.50**



HANDMIKE

Rugged, heavy-duty carbon hand mike with press-
to-talk switch. Equipped with 4-ft cord & phone
plug. **\$PECIAL**
NEW, boxed..... Each **\$1.88** 2 for \$3.25



2" DC VOLTMETER

Mounts in 2-1/8" hole. Flange diameter 2-5/8"
Two scales: 0-15 and 0-600. Calibrated for use
on steel panel. Standard brand. **SPECIAL**
NEW, boxed..... Each **\$1.75** 2 for \$3.00



BC-733 RECEIVER

Receives radio signals
being transmitted by US satellite on approx. 108
Mc. AM, crystal-controlled on 6 preset freqs. in
108.3 to 110.3 Mc range. Operates on 12/24 V
DC & 220 VDC 80 Ma. Complete with 10 tubes.
Can be converted to FM Receiver
80 to 108 Mc. Exc. Used..... **\$5.95**
BC-732A Control Box for above, NEW... 1.75



T-41 / APS - 18 TRANSMITTER

ANTENNA UNI designed for 115 V 800 to
1400 cps. Tubes included are two 15E and one
15R. Complete with shock mounts
and blower motor. 7x8x18", NEW.... **\$8.95**



BC-223AX TRANSMITTER

25 Watt, CW, MCW,
Voice, Crystal control on 4 pre-selected channels,
range 2000 to 5200 Kc by use of 3 plugin units,
Included. Complete. **\$27.50**
BRAND NEW.....



APN-1 FM TRANSCEIVER

400-450 Mc. Freq.
modulated by moving coil transducer. Easily con-
verted for radio control or 70 cms. Complete with
14 tubes, dyn.
BRAND NEW..... **\$9.95**



AM-26/AIC PHASE INVERTER AMP.

4-tube pushpull power amplifier. Carbon mike
input, hi-lo imp. output. Works on 24VDC. Easy-
ly converted to dandy 9-watt amplifier. Complete
with tubes and dynamotor
LIKE NEW **\$5.95**



WILLARD 2-VOLT STORAGE BATTERY

Rated at 20 Amp.-Hours. Model 20-2. Rechargeable.
Compact nonspill construction. Lightweight polysty-
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IP-69A/ALA-2 INDICATOR

3" scope.
Front panel controls: Vertical Pos., horizontal pos.
Intensity, focus, gain, width, center freq. Pan.
Operates on 115 V 380 to 1000 cps.
Complete with tubes. LIKE NEW..... **\$27.50**



WESTERN ELECTRIC

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3" Round, Center read-
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G.E. DC MILLIAMMETER

0-1 Ma. Move-
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0-2 and 0-40.
3 1/2" round.
Each..... **\$3.95**

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3" Square Meter
0-800 Milliamps.
Flush mtg. Each..... **\$3.25**

CD-307

CORD



Extension for cords with PL-54
plug as used on headsets. 65" long
with JK-26 jack and PL-55 plug.
NEW..... **\$1.35**

CD-604 CORD

with impedance mat-
ching transformer 500 ohm to 4000
used with HS-30 Headset. 6' cord
with PL-54 plug. **95¢**
NEW.....

CD-605 CORD similar to CD-604
Cord but with PL-55 plug instead
of PL-54, and this cord is 30"
long. NEW..... **95¢**

MC-385 High to Low Impedance HEADSET ADAPTER

For use with headsets HS-33, HS-
38 or other high impedance phones
Jack for PL-55 on one side of case
(input), PL-55 plug on other side,
(output). NEW..... **59¢**

AT

dis-
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Juc-
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uses 2 micro-
1 mounted in
neckpiece with
Operates between

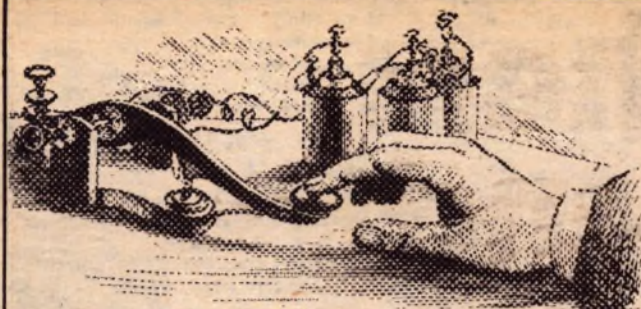
88¢

T-30 THRO MIKE

Gives
that v
repro-
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most i-
phone
rubber

elastic neckband.
100 & 300 ohms.
NEW.....

NEW.....



Two Hundred Meters and Down

(First published in 1936, "Two Hundred Meters and Down" is reprinted here, in serial form, so we may have a better knowledge of the vast and great history of Amateur Radio. This presentation is in honor of those who went before us and, through determination and hard work, gave us what we have today.)
 * * * * *

Continued from last issue
 Part I - Pioneers
 Chapter Six... The American Radio Relay League

Pondering the problem, with characteristic insight he divined the solution. To one of the early meetings of the Radio Club of Hartford there had come a young lad from Windsor Locks, a small town intermediate between Hartford and Springfield, who said he had a transmitter on the air. The topography of the intervening region was such that he could work both Hartford and Springfield with ease.

Maxim solved his problem by calling this Windsor Locks amateur and asking him to relay the message to Springfield. The feat done, he sat back in his operating chair, puffing his familiar pipe, and pondered more. Driving from his home downtown to his office behind the wheel of his huge automobile the next morning, he continued to think about the incident of the night before, and an inspiration was born.

He has always been careful, since that time, to explain that no significance attached to that particular relay. It was not the first time that relaying had been accomplished. Ships at sea were using the relay principle to get messages from mid-ocean to shore. Amateurs themselves had probably relayed messages beyond the limits of their particular sets before. It is certainly true that the Central Radio Association ("From the Rockies to the Ohio"), which was organized in 1911 and which in 1914 had several hundred members, shortly afterward was relaying messages over hundreds of miles. No, the relay was not especially significant.

The real significance attached to the thoughts that went on in Maxim's mind after the relay had been accomplished, for that next morning there was born the germ of an idea for the long-needed and much-desired truly representative national amateur radio organization. Maxim had for many months felt the need for such an organization, just as he had felt the need for a local club in Hartford. The latter had come to pass. Now the realization of the former was at hand.

The relay idea represented an ideal basis for the needed national organization. Some basic principle, some prime moving force, was essential for the success of such an organization. Americans have always been great "joiners" but if an amateur organization were ever to progress beyond the paper stage, or expand into more than a local club, it must offer more than a gaudy membership certificate and one's name on the rolls. The futility and early decease of the Wireless Association of America had shown this clearly, as did the restricted appeal, limited to the New York metropolitan area, of the Radio Club of America.

by Clinton B. DeSoto

At best, ranges in those days were limited. With the power and the equipment and the wavelengths then available, there was little hope for enlargement of the distances covered. After all, the only way radio folk of those days knew how to get greater distance was to increase power, and amateurs were limited to one kilowatt. Even if this were stretched to two or three, as was still occasionally done, the improvement was not appreciable. But an intermediate amateur could relay messages over greater distances with ease and expedition. The only requirement was to achieve some sort of mutual understanding so that each amateur would aid his fellows. Organization was needed -- organization that would accomplish the dual purpose of opening relay facilities to all and of bonding together the amateurs of the country into one strong, cohesive, self-reliant body.

All these thoughts coursed through Hiram Percy Maxim's mind as he drove to his office that brisk March morning in 1914. There even occurred to him a name for the organization -- the American Radio Relay League. The next step was to put the idea into execution. He presented his plan to the members of the Radio Club of Hartford at its next meeting, April 6, 1914. The club voted to take charge of the development of a relay organization, and a committee to handle the details was appointed by the chair. The first steps toward the fulfillment of the idea had been taken.

By middle May application blanks bearing detailed questions concerning receiving and transmitting equipment and performance were printed, and Maxim and Secretary Tuska sat down and wrote letters to every amateur station they could think of, announcing the formation of the American Radio Relay League and enclosing one of these blanks. There were no dues; membership was free on application. At the same time, the requirements were set at a high standard and rigidly maintained, so that only qualified amateurs were accepted as relay stations. The response was tremendous. Application blanks came back in every mail. On June 16th the Radio Club of Hartford appropriated the sum of fifty dollars to be spent in further development work. Prior to this time, Maxim and Tuska had paid for the solicitation letters out of their own pocketbooks. The influence of the League was mounting rapidly. It had members in every section of the country. By June, successful relays had been accomplished over such routes as Hartford to Buffalo. A route from Boston to Denver was being organized.

Popular scientific magazines of the time aided the new organization with favorable publicity. A quotation from the July, 1914, issue of Popular Mechanics is of particular interest in that it exemplified the viewpoint of these early pioneers in amateur organization:

"It is pointed out by the organizers of the League that up to the advent of wireless telegraphy it was necessary to rely upon either a telephone or telegraph company or the Federal government, for transmitting intelligence from one part of the country to another. The coming of wireless telegraphy has made it possible for the private citizen to communicate across great distances without the aid of either the government or a corporation, so that the organization of the relay league actually marks the beginning of a new epoch in the interchange of information and the transmission of messages."

This was truer than they then knew. The change of the predominant majority in amateur radio from a group of experimentally-inclined technicians to a group of communicating amateurs has already been emphasized. The entire character of amateur radio had altered during the preceding five years. It remained for Hiram Percy Maxim to perceive how those previously aimless threads of activity on the

courtesy of ARRL

air could be woven into a fabric of genuine service, both personal and public, through the free transmission and relaying of messages.

By August, 1914, more than two hundred relay stations had been appointed, from Maine to Minneapolis and from Seattle to Idaho. One of the stations belonged to a man 64 years old; others were owned by youths just entering high school.

In September the League published a map of the United States showing the location of 237 stations in thirty-two states and Canada. In October the League published its first call book, actually a List of Amateur Stations, a little blue-bound book showing the names, addresses, calls, power, range, receiving speed and operating hours of 400 stations. One-kilowatt stations were surprisingly numerous; they claimed ranges from 50 to 350 miles. The smaller stations, using from 10 to 100 watts, worked from 10 to 20 miles. This call book, the United States map, seven state maps, and a pad of 50 official message blanks were sold for 50 cents.

In late 1914, Maxim went to Washington and conferred with the Commissioner of Navigation of the Department of Commerce. The object of the conference was to establish the League in official circles, and to secure the important concession of permission to operate stations at strategic points along the relay routes of the country under special restricted licenses, enabling them to use the wavelength of 425 meters. These licenses were issued wherever necessary to enable relaying to the next point on the chain, and were granted only to stations sufficiently remote from the sea-coast to avoid interference. The sole restriction was that the 425-meter wavelength was to be used exclusively for the relaying of bona fide messages, and not for idle conversation.

The League was actually relaying messages by this time. One station reported handling forty messages in two weeks. Another station owner hired an extra operator, to keep the transmitter constantly on the air and prevent an accumulation of messages. Dozens of other stations were on the air practically continuously, doing nothing but handling traffic. Relay networks had been lined up with fair efficiency over most of Eastern United States.

(Continued in the next issue of WORLD RADIO)

Hadley (cont'd) From Page 10.

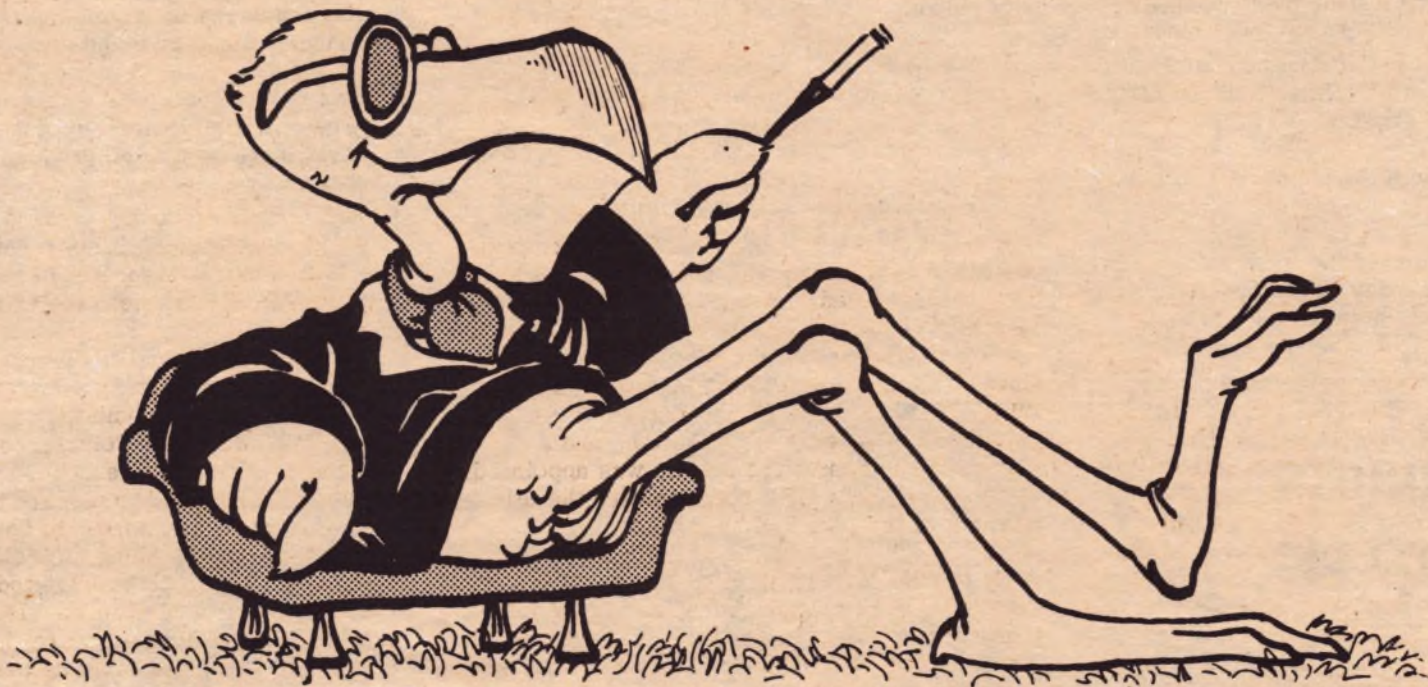
examination for a General Class amateur operator's license. So far, the Hadley graduates have an almost perfect record; the FCC test has been passed successfully by nearly everyone who has taken it.

Hadley "hams" speak enthusiastically about their hobby. In addition to the sheer fun of "rag-chewing" via the air waves, they find satisfaction through many public service and civil defense activities. As one graduate now puts it, "My only regret is in now realizing what I've missed by not getting into Amateur Radio years ago."

Under the volunteer chairmanship of Mr. Sharpe, the Hadley Radio Department maintains an active ham club with its own station, WA9WHS. A generous grant from the Marian Falk Foundation has provided for a complete highest-legal-power radio station. The group plans to conduct informal on-the-air meetings and schedules twice a week.

The Radio Department welcomes inquiries about its course and its club. All communications should be addressed to the Hadley School for the Blind, 700 Elm St., Winnetka, Ill. 60093.

What has feathers, a lot of class, and loves hams?



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Keep up the fine work on WORLDRADIO. You are doing a wonderful job... Ethel Smith, K4LMB

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I am impressed with the paper... Leo Gibbs, W8BHT

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I want to let you know that I have enjoyed receiving such a fine newspaper. I think it is very informative... Bob Weitbrecht, W6NRM.

... Very good journalism... Paul Schuett, WA6CPP.

Pleased to renew subscription to WORLDRADIO. It is outstanding and high quality... Wayne Perry, W5YK, Lt. Col USAF (Ret.)

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Third Year of Publication

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information

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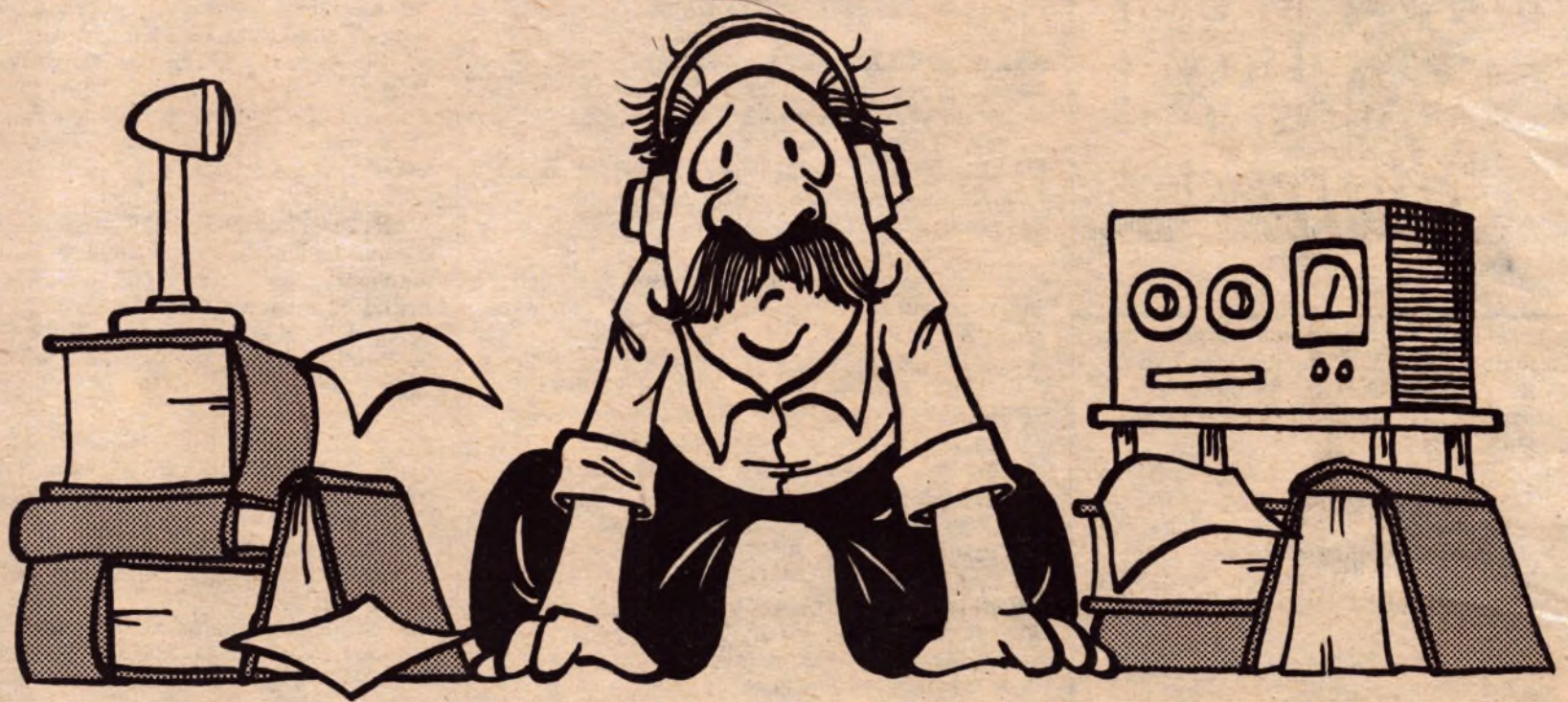
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