

ZERO BEAT



HEADQUARTERS MARINE CORPS HENDERSON HALL ARLINGTON, VIRGINIA 22214 MARCH 1970



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**ZERO BEAT PUBLICATION.
HEADQUARTERS MARINE CORPS
HENDERSON HALL,
ARLINGTON, VIRGINIA. 22214**

EDITORIAL

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OUR COVER: THE WHOLE CREW AT NØRTW
MINUS RON FONG. SEE STATION OF THE
MONTH ARTICLE. PHOTOS BY MR. JOHN
B. VINCENT



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NOASB

It's been better than forty days and nights since the floods receded at NAV-2; however, the affects are still being felt. The casualties included Zero Beat, and some gear. One final semi-scientific observation is that irrigation and electronic equipment do not mix.

With everyone's cooperation and plenty of input, we will have no problem in publishing this monthly edition.

A lot has happened since the last edition of Zero Beat and we want NØALM to be informed. The word has a strange way of getting around in a system like this-wonder why? Take a group of Marines and they make a pretty tight group, but make them hams and the result is a mass so tight you couldn't pull a piano wire through it with a switch engine.

This space is now being used up by 1Lt Clyde Chappell as NØASB. I am in the slot formerly held by CWO Joe Van Brocklin, although I am sure I could never replace him. I worked with Joe for two months, and he is one of the finest men I have known and a very tough act to follow. He is on his way to Okinawa very soon and we will hear from him often.

I was chosen for this job at Headquarters by gravity, that's right, gravity pulled the dart down too far and it chose me. I am a 2502 Communication Officer straight back from Vietnam where I served as Comm O for the Third Battalion 7th Marines. Joe readily knows how to break-in a relief. I went to Miami to the Tropical Hamboree and saw how the program works in the field, and what a field! The trip to SAROC was cancelled due to lack of funds and resulted in a real lack of fun. We have had nothing but spectacular reports on the Marine performance at SAROC, and so maybe it's a good thing I didn't go.

Chief, Navy-Marine Corps MARS has relocated to the following address:

Chief, Navy-Marine Corps MARS
4401 Massachusetts Avenue, N.W.
Washington, D.C. 20390

Don't let the "bigtime" address snow you, we are still the folks who lived out at Bailey's Crossroads.

A problem is personnel. We would appreciate any Marines, who are qualified for 8981, there is good duty open to them.

Until next month, 73's!

1Lt CLYDE CHAPPELL, NØASB

★ OKINAWA ★

AMATEUR RADIO - MARS COORDINATOR

The month of October found the MARS system in quite an uproar on Okinawa. Most units presently located on the Rock have relocated from one camp to another, with most every camp affected in some way. Traffic and phone patching have been interrupted for about a two week period trying to make way for the 3rd Marine Division.

Hopefully, the month of November will see the opening of KR6CP, Camp Courtney. A FREE five wave length rhombic will be installed by the Army at Camp Courtney. Camp Courtney will be primarily utilized for phone patch operation to CONUS. Equipment to be placed in Courtney will be brought from RVN by the division. It is understood that this equipment will possibly be that used by NØEFQ. The 3rd Division Special Services Officer Colonel TUMA, requested this particular equipment since GySgt DELPERDANG (Del) was NCOIC of that station. Have heard nothing but praises from the Colonel regarding Del and his operations while at EFQ. Let us in on the secret, Del.

On 7 October the tower and 20 meter beam located at Camp Foster, KR6GF "speakee sayonara." Evidently Bob LASZKO must have been in the area, because hot air at the speed of 70 knots per hour were experienced on Okinawa. That self supporting tower is now self lying. Both tower and antenna were total losses.

Just received two Rohn towers with tilt over assembly and four Mosley 5-element 20 meter beams. Somebody up there likes us. They came just in time. One of each will be installed at Camp Foster to replace those lost due to the high winds. One of each will be installed at Camp Hauge, to add flexibility to the tower of power. The other two beams will go to Camp Hansen and possibly Camp McTugeous.

Cpl Steven Patton extended his tour on the Rock until April of 1970. Since Steve's license has expired he has been moved down to Camp Hauge to assist in MARS operation. Better get hot boy and get that license renewed.

As soon as a division arrives personnel shortages should be corrected. It is my understanding at the present that Butler will be augmented by nine operators Oh, well!

The coming months will see an increase in MARS/Amateur activity from Okinawa, or somebody's going back down "South". Only one problem exists with the increase in activity--Teletype. Hopefully this activity will improve in the near future Time will tell.

73's

BILL REED



NØPPC



RVN-CONUS PHONE PATCH COORDINATOR.

1. CANCEL NØPPC MESSAGE 090100Z JAN 70
2. CHANGES BEING MADE RVN NECCESITATE THE FOLLOWING ASSIGNMENT CHANGES.
3. AMPLIFICATION TO CHANGES TO FOLLOW IN LATER MESSAGE.
4. PAC/CONUS QUARTERLY PHONE PATCH ASSIGNMENTS: EFFECTIVE 050100Z FEB 70.

READ IN FIVE (5) COLUMNS:

FREQ (KHZ)	L	U	PRI	STA	BACKUP STA(S)	WORKING
5. 11402.9	L	(P)		NØRSE	(B) NØJPJ	WORK NØEFB
	U	(P)		NØFMO	(B) NØJPJ	WORK NØEFO
6. 13827.5	L	(P)		NØUSM	(B) NØFMO	WORK NØEFE NØEFO
7. 13927.5	L	(P)		NØRTY	(B) NØFOC NØJPJ	WORK NØEFC NØEFM
	U	(P)		NØRTW	(B) NONE	WORK NØEFK NØEFS NØEFZ
8. 14470	L	(P)		NØANP	(B) NØLUV NØYEW	WORK NØEFL NØEFT
	U	(P)		NØTEF	(B) NØANP NØJPJ	WORK NØEFY
9. 14480	L	(P)		NØWTG	(B) NØKIX NØAGA	WORK NØEFD NØEFZ
	L	(P)		NØWTG	(B) NØKIX	WORK JAPAN
	U	(P)		NØRSB	(B) NØAAV	WORK NØEFJ NØEFC
	U	(P)		NØRSB	(B) NØTEF	WORK JAPAN
	U	(P)		NØRSB	(B) NONE	WORK NØIKK NØRSN (ALL PHIL)
10. 14760	U	(P)		NØFOC	(B) NONE	WORK NØEFR
11. 19430	L	(P)		NØRTY	(B) NØRSB NØTEF	WORK NØEFB NØEFD NØKYZ
	U	(P)		NØAVD	(B) NØISY NØKOR NØYSR	WORK NØEFN NØEFP
12. 19671.5	U	(P)		NØJPJ	(B) NONE	WORK NØEFY
13. 19918.5	U	(P)		NØRTY	(B) NØRSB NØTEF	WORK NØEFB NØEFD
	L	(P)			(B)	
14. 19956.5	L	(P)		NØFMO	(B) NØHFO NØHNH NØIYO NØJUN	WORK NØEFR
	U	(P)		NØIYO	(B) NØFMO NØHFO NØJUN	WORK NØIKK NØRSN (ALL PHIL)

15. 20375 U (P) NØUSM (B) NØJUN NØJUX NØRTW WORK NØEFE NØEFO
16. 20525 U (P) NØRTY (B) NØLUV WORK NØEFC NØEFL NØEFT
17. 20625 U (P) NAV8 (B) NØJCQ NØWTG NØFAA WORK NØEFS NØEFY
18. 21760 U (P) NØTEF (B) NØJPJ WORK NØEFD NØEFJ
19. 27900 L (P) NONE (B) NØJPJ NØUSM WORK NØEFO NØEFS
U (P) NØRTW (B) NØFMO WORK NØEFD
20. 27950 U (P) NØTEF (B) NØAGA WORK NØEFJ NØEFK
L (P) NØRTY WORK NØEFB

21. REQUEST NØGJA, NØGOK, NØGPH, NØGVN, REPRODUCE COPIES THIS MSG AND FORWARD TO ALL ACTIVE STATIONS WITHIN THEIR RESPECTIVE JURISDICTION

22. SPECIAL ATTENTION WILL BE GIVEN TO FREQ TOLERANCE IAW DNC 8 ANNEX (B) AND ALL CURRENT/SPECIAL ORDERS/DIRECTIVES/INSTRUCTIONS PERTAINING THERETO.

23. ALL STATIONS WILL OPERATE ON ASSIGNED SIDEBANDS AND FREQS AS SET FORTH IN THIS MSG ONLY, EXCEPT WITH PRIOR AUTH. FROM NØPPC AND NØGVN OR APPROPRIATE DIST. DIR. WHERE APPLICABLE.

24. ALL CHANGES ARE COORDINATED WITH NØGVN.

25. REQUEST FOR ASSIGNMENTS NOMINATIONS TO RVN/CONUS PHONE PATCH NETWORK CONTAINED IN NAVMARS 31/68. IT IS REQUESTED SUCH REQUESTES BE MADE IN MESSAGE FORMAT VICE LETTERS/PHONE CALLS.

26. THIS MSG MAILED AS CONFIRMATION TO ALL DIRECTORS. ALL PREVIOUS RVN/CONUS PHONE PATCH ASSIGNMENTS MADE PRIOR TO 090100Z JAN 70 ARE HEREBY CANCELLED. COORDINATION WITH NØGVN EFFECTIVE 05 JAN 70 SUB-CHANGES SENT TO ALL CONCERNED WITH THE GIVEN FREQS HAVING CHANGES MADE. ALL OTHER ADDEES NOT IMMEDIATELY CONCERNED AND NOT AFFECTED, ARE BROUGHT UP TO DATE WITH NEXT QUARTERLY SHEET.

27. CURRENT AND CORRECT MAILING ADDRESS AND PHONE INFO OF NØPPC IS:
NØPPC
BLDG. 340, DEPOT SPL SVCS
MCRD, SAN DIEGO, CALIF 92140
AUT 957-4681/957-5153
CODE 714 PHONE 225-4681/225-5153

BT

RVN

NØGVN



5 October 1969

Things in RVN are changing at a steady pace and I have been remiss in sending in material for your column so will bring everyone up to date.

NØEFA and NØEFQ have gone QRT as of 9 October 1969. GySgt Delperdang is presently at NØEFJ and preparing to move that station to the DaNang area under cognizance of MAG 16. SSgt Padgette is still the NCOIC of NØEFJ but wanted to put Dels talents to work for the limited time he has in country. SSgt Davis from Alpha goes out to the Naval Hospital USS Repose today as their radio operator. NØEFU and NØEFF have gone QRT. This month will see NØEFI, NØEFG and NØEFH also shutting down. No other closures are now planned.

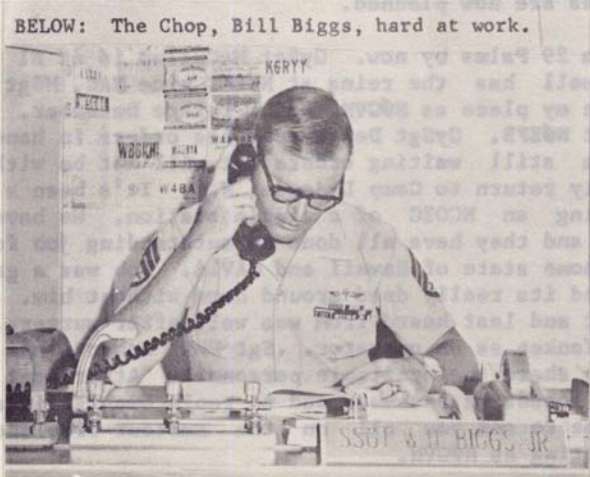
GySgt Boni should be active from 29 Palms by now. GySgt McCullum is at El Toro with 3rd MarAirWing. GySgt Maxwell has the reins at NØEFC vice MAC. MSgt Wes Wilson has been recalled to take my place as NØGVN as I rotate December. SSgt Henry Rhodes assumes the helm at NØEFB. GySgt Delperdang has orders in hand for Beaufort, S.C. with MARS. I am still waiting orders but will not be with the MARS program and will undoubtedly return to Camp Lejeune, N.C. It's been a good tour for me but nothing like being an NCOIC of a single station. We have had some very good men to work with and they have all done an outstanding job for me. GySgt Rivera has left for his home state of Hawaii and NAV14. Bob was a great help to me here at Yankee and its really dead around here without him. SSgt Atkinson was medivaced in August and last heard from was well after surgery. We have Sgt Stan Thurston here at Yankee as an operator. Sgt Phil Roberts has been reassigned to NØEFC as we try to share the available personnel. At present there are 14 people aboard with two losses in December and no replacements in sight till January. 73 to all and hope to see you all on the amateur frequencies. Next month Wes should be propagating as NØGVN.

Bill

NORTH



ABOVE: Jim Kuhl at the Tech bench. LEFT: Chris at phone patch #1, runs with RVN. BELOW: Tony Green cuts traffic at RTTY #2



BELOW: The Chop, Bill Biggs, hard at work.



NORTW: STATION OF THE MONTH

"This is the best MARS station I have ever seen." The preceeding quote was made on September 16, 1969 by the Commandant of the Marine Corps, General L. F. Chapman, to the Commanding General MCSC, Barstow, Brigadier General J. E. Herbold, during CMC's visit to NORTW. Those in the system and out of it, should be as proud of these words as they are at NORTW. It took each and everyone of them to make these words true. Over the years NORTW/W6ZJB has progressed from a small room in a corner of a warehouse to a seven room house with accompanying antenna farm. Many operators and chops have passed through the station in the "High Desert":

The Ole' Cotton Picker Bob Rotella, John "Son-of-a-Gun" Johnson, Ed Bergeron, Larry Mathans, Jim Bogue, Larry Wuerbler, and more.

Now NORTW is manned by Jim Kuhl, Tony Green, John Christianson, Ron Fong, and Bill Biggs. They will pass, but the Navy/Marine Corps MARS System's newest and most modern station will continue to grow and expand the service it is now helping to provide our forces overseas and their families and friends at home.

What does it take to be "The Best"? To start with a good command relationship is a must. From April 1969 to the present, the Supply Center has spared no expense to make the station what it is today. \$14,000 worth of new equipment started it off and an additional \$10,000 in labor and materials was put into the new building. To give an example of the support, NORTW had 2 new UGC-6K's ordered and paid for but NSC, Oakland, didn't ship them because of priority shipments to WesPac. The battalion Commanding Officer, Lieutenant Colonel Watson, upon hearing of the problem, sent Staff Sergeant Lerch (who was on leave there at home) from his S-4 shop up to Oakland. They had the ASR's the next day.

Those who haven't had the opportunity to work at or with the "NEW" NORTW may ask what goes on there.

NORTW is the MARSTELSYS Primary Relay Station for the 8th, 9th, 11th, 12th, 13th and 17th Navy Marine Corps MARS Districts, which make up a full 75% of the land mass of CONUS. In this capacity they handle an average of twelve to thirteen thousand messages a month. This figure seems a lot but by proper utilization of two S-lines, 2 UGC-6K's on RTTY, and having 2 to 3 operators in the teletype room daily they are able to keep the average man hours per week down to a reasonable 41.6 hours. The secret, although not anything new, is to hit the eight daily RTTY skeds on time and get off at the conclusion of the traffic passing.

Of no little aid in getting traffic in and out with a minimum of time and effort, are the 2 Henry 4-K's, Frederick Model 1200 Demodulator and elaborate antenna system.

The latter is supplemented by 16,000 feet of soft drawn copper wire buried in a four foot grid system which has improved the signal a great deal.

Those BUG-A-BOOS to all MARS Teletypewriter Relay System Stations, Tracer/Service messages are handled with ease as each and every message which enters or leaves the station is logged in and/or out on the station traffic log sheets and then filed by date-time-group. This method gives a complete history of each individual message while it is in the station.

Work orders have been submitted to install AN/FGC-38 Automatic Relay Equipment and two AN/FRT-18 transmitters (5KW all mode). Great things are expected from this equipment in cutting down traffic handling time.

Those stations that sweat and slave over repairing RTTY terminal Equipment might take a hint from NORTW and, if possible, have a service contract with the nearest Western Electric Teletype Maintenance Facility. This saves time and many frustrating experiences.

Phone patches are the same world wide and station to station, but NORTW has even gotten that simple operation down pat by the use of two 1700 type telephones at each of the two phone patch positions. This gives the phone patch operator access to three commercial lines with direct dialing facilities and two base lines. The base lines serve an excellent function as NORTW is permitted the use of the WATS lines for phone patching into the 213, 805, 714 area codes during off duty hours (1615-0730) Mon-Fri and all day Sat and Sun and holidays.

Fiscal problems have been solved by having the station written into the Supply Center emergency communication plan. This provides for expenditures of appropriated funds over and above those normally available to a station serving only a morale and welfare function. NORTW even has its own 12KW emergency generator housed separately, with all switchover wiring installed so that they can change from main to emergency power in less than 30 seconds.

To insure that all personnel work and receive experience in all areas of station operation, they have divided up into two watches consisting of Tony and Bill, Jim and Chris. These two sections rotate weekly between phone patch and RTTY while the chop floats and assists whenever and wherever needed. This leaves him free for command functions and supervision while Ron, the clerk-typist, takes care of all the paper work inherent in the operation of a station that size.

They don't get away with just operation, though. Each man has a collateral duty such as Supply NCO, Emergency Comm NCO, Teletype Tech, Building and Grounds NCO, Motorcycle Mechanic, etc.

All this may seem involved and complicated but has worked smoothly during the last several months. The emphasis at NORTW is on only one goal, and that is to IMPROVE!!!

BITS AND PIECES

NØEPD -- Last fall this station had its share of promotions, with LCpl Seaward in September and LCpl Miller in October. In October Dave Keith departed. The station has new model 28 gear and has put it to good use.

NØANP -- **NØANP** supplied the equipment for the booth at ARRL S.W. Division Convention in October. The personnel situation had many changes with the arrival of Buzz from **NØEFL**. Doug went to Radio Chief School and Jack got orders to West-Pac.

NØEFT -- Back in September **NØEFT** lost 3 operators to the 30 day out, then got three new operators in, one with an advanced license. They're working still toward a new station.

NØFOC -- Cpl Mike Linger arrived for the USS Repose back in September. The station joined the Copper State Traffic Net to dispose of W6YDK's recruit arrival traffic. The net meets at 0230 on 3.878 MHz MON-FRI.

NØFAA -- SSgt Len Klopp (Chop Klopp) arrived at **NØFAA** in September.

NØIXF -- **NØIXF** has a new Heath HW 17A for 2 meter operation.

NØIZG -- In September **NØIZG** saw the beginnings of a new station. They had a stint of operating under-manned for 31 days because one man was pulled for duty. They are now capable of both 60 and 100 wpm operation on teletype and looking to improve.

NØIVT -- The station finally was able to return to normal operation last October

WANTED: Antenna Couplers AN/SRA-13, 14, 15, 16. Does anyone know if these are available and if so where can they be acquired? Call CHOP,NAV2 at OX4-4517 or 703-525-4452



ABBREVIATIONS

ACK	ACKNOWLEDGE (MENT)
ACPT	ACCEPT
ACT	ACT(ING)(IVE)(ION)
ACTY	ACTIVITY
ADAVAL	ADVISE AVAILABILITY
ADCON	ADVISE ALL CONCERNED
ADEE	ADDRESSEE
ADMIN	ADMINISTRAT(E)(IVE)(ION)
ADMSG	ADVISE BY ELECTRICALLY TRANSMITTED MESSAGE
ADSTADIS	ADVISE STATUS OR DISPOSITION, OR BOTH
ADTAKE	REQUEST ADVISE ACTION TAKEN
ADV	ADV(ANCE)(ICE)(ISE)
ALCON	ALL CONCERNED
ALNECOS	ALTERNATE NET CONTROL STATION
AMND	AMEND(ED)(S)
ANS	ANSWER
APP	APPENDIX
APPL	APPLI(CABLE)(CANT)(CATION)
APPR	APPROVE(D)
APPROX	APPROXIMATE(LY)
ARNG	ARRANGE(D)
ARR	ARRIV(AL)(ED)
ARREP	UPON ARRIVAL REPORT (TO)
ATTNDIR	ATTENTION DIRECTED
ATTNINV	ATTENTION INVITED
AUTH	AUTHORI(TY)(ZED)
AUTHGRA	AUTHORITY GRANTED
AVBLTY	AVAILABILITY
CACOR	CASUALTY CORRECTED
CASREP	CASULATY REPORTED
COMPL	UPON COMPLETION THEREOF
COMSEC	COMMUNICATION SECURITY
CONUS	CONTINENTAL UNITED STATES
DIRLAVTH	DIRECT LIAISON AUTHORIZED
DTG	DATE TIME GROUP
END	ENDORSEMENT
FAX	FACSIMILE
FLEACT	FLEET ACTIVIT(E)(S)(Y)
FONECON	TELEPHONE CONFERENCE
FORAC	FOR ACTION
FYI	FOR YOUR INFORMATION
FYIG	FOR YOUR INFORMATION AND GUIDANCE
GARBLE	AN ERROR IN TRANSMISSION WHICH RENDERS A MESSAGE OR A PORTION THEREOF INCORRECT OR UNDECIPHERABLE
IAW	IN ACCORDANCE WITH
ICO	IN CASE OF
ICW	IN CONNECTION WITH
INFOREQ	INFORMATION REQUESTED AS TO

NOTICE

TO ALL VISITORS

WHAT YOU ARE ABOUT TO SEE IS AN AMATEUR RADIO STATION LICENSED BY THE FEDERAL COMMUNICATIONS COMMISSION. BEFORE YOU ASK THE QUESTIONS, HERE ARE THE ANSWERS:

1. The total cost of the equipment was about \$ _____.
2. No, we cannot send a message to your brother in Hong Kong. We suggest you call Western Union.
3. This is strictly a hobby; we do not have the facilities or the time to fix T V sets and Hi Fi sets. We suggest you see a serviceman.
4. Yes, the antenna in the back yard is necessary for the proper operation of the equipment.
5. The farthest station we have contacted has been in the Ubangiland.
6. The cards on the wall are called QSL cards. They are confirmation of contacts made with other stations.
7. Oh, no! NEVER does this station equipment interfere with the operation of Television sets.

IF YOU ARE INVITED TO SPEAK ON THE MICROPHONE, PLEASE OBSERVE THE FOLLOWING RULES:

1. Speak in a low and soothing tone.
2. Do not disagree with me in any manner.
3. Say no bad words and tell no off-color jokes.

F U T H E R M O R E

DO NOT TOUCH ANYTHING, TURN ANY KNOBS, SIT ON EQUIPMENT, ETC. WE HAVE LOST SEVERAL VISITORS BY ELECTROCUTION IN THE PAST FEW MONTHS.

Station	Orig.	Recd.	Rlyd.	Deliv.,	Total	Total P/P
NØEFT	305	79	8	62	454	1091
NØEFB	392	5331	5846	123	11692	663
(KP4AZJ)	---	----	----	---	-----	504
NØIZG	0	3	0	1	4	797
(KH6BGS)	---	----	----	---	-----	18
NØTEF	6	46	0	26	96	608
(K6MCA)	---	----	----	---	-----	78
(KR6FQ)	12	4	0	0	16	382
NØFIT	---	----	----	---	725	193
(KR6DI)	---	----	----	---	-----	478
NØETL	---	----	----	---	4	---
(KR6GF)	---	----	----	---	-----	491
NØETG	---	----	----	---	6446	0
(KR6MB)	---	----	----	---	-----	882
NØETJ	---	----	----	---	127	0
(KR6MH)	---	----	----	---	-----	1256
NØETH	---	----	----	---	2345	61
NØFJM	30	11	0	0	41	2626
NØIXF	4	252	279	9	544	91
(K4BUJ)	0	8	7	0	15	----
NØANP	2193	281	155	128	2757	483
(W6YDK)	4634	238	190	48	5110	2
NØFOC	7	2	7	2	18	629
(WA7AAJ)	3	0	3	0	6	200
NØASM	23	4078	4102	5	8208	0

SEPTEMBER

NØEFJ	48	40	23	40	111	1523
NØEPD	771	1498	1281	217	3767	1945
NØIZG	---	----	----	---	-----	1478
(KH6BGS)	0	5	3	1	9	38
NØIXF	5	308	333	9	655	444
NØEFT	316	93	5	70	484	1138
(KR6FQ)	4	2	0	2	8	399
NØFIT	---	----	----	---	910	264
(KR6DI)	---	----	----	---	---	513
(KR6DE)	---	----	----	---	---	444
NØETG	---	----	----	---	6850	2
(KR6MB)	0	2	2	0	4	775
NØETJ	---	----	----	---	60	0
(KR6MD)	---	----	----	---	-----	35
NØETI	---	----	----	---	546	0
(KR6MH)	---	----	----	---	-----	1061
NØETH	---	----	----	---	2187	32
NØFAA	40	1285	1312	13	2650	325
NØFOC	9	6	1	5	21	415
(WA7AAJ)	0	3	57	1	61	67
NØTEF	4	16	0	2	22	475
(KP4AZJ)	---	----	----	---	-----	780
NØFJM	51	16	0	16	83	2300
NØRTW	32	6352	6380	4	12768	1290
(W6ZJB)	---	----	----	---	-----	2
NØASM	22	3415	3428	8	6823	0

OCTOBER

Station	Orig.	Recd.	Rlyd.	Deliv.	Total	Total P/P
NØANP	2082	202	113	100	2497	2
(W6YDK)	2582	217	95	122	3016	26
NØRTW	28	6098	6099	12	12239	994
NØEPD	1061	2041	1752	289	5143	1269
(KR6FQ)	----	----	----	---	-----	6
NØFIT	----	----	----	---	318	84
(KR6DI)	----	----	----	---	-----	564
NØETL	----	----	----	---	2	---
(KR6GF)	----	----	----	---	-----	392
NØETG	----	----	----	---	182	---
(KR6MB)	0	1	1	0	2	735
NØETJ	----	----	----	---	107	---
(KR6MD)	----	----	----	---	-----	170
NØETI	----	----	----	---	5601	4
(KR6MH)	----	----	----	---	-----	738
NØETH	----	----	----	---	2676	91
NØEFB	325	4170	3842	---	8337	978
NØEFC	1423	46	1584	f--	3053	1009
NØEFL	63	60	63	---	186	861
NØEFJ	43	60	52	---	155	1624
NØEFT	312	101	312	---	725	1201
NØEFY	3	20	3	----	26	355
NØIZG	0	6	0	6	12	386
(KH6BGS)	0	4	0	4	8	57
(KP4AZJ)	----	----	----	---	-----	1009
NØIXF	4	488	464	60	1016	244
NØFOC	7	3	2	6	18	317
(WA7AAJ)	0	62	60	3	125	22
NØASM	45	3853	3885	8	7791	0

NOVEMBER

NØEFB	311	4393	4426	----	9130	1102
NØEFC	1113	143	1264	----	2520	1197
NØEPD	1242	1724	4211	----	7177	962
NØEFJ	16	10	16	----	42	392
NØEFL	74	55	74	----	203	859
NØEFT	453	64	453	----	970	797
NØEFY	41	50	59	----	150	358
NØTEF	16	14	20	2	52	1210
(K6MCA)	0	18	0	0	18	75
NØRTW	18	5453	5478	0	10949	1826
NØFOC	4	8	7	1	20	103
(WA7AAJ)	2	37	37	0	76	13
NØASM	10	3655	3640	6	7311	0

DECEMBER

<u>Station</u>	<u>Orig.</u>	<u>Rcvd.</u>	<u>Rlyd.</u>	<u>Deliv.</u>	<u>Total</u>	<u>Total P/P</u>
NØFJM	42	13	0	13	68	1973
NØKFB	206	7838	8665	-----	15909	1197
NØEFC	836	591	1427	-----	2854	1306
NØEPD	3986	2555	6015	-----	12556	999
NØEFJ	102	82	102	-----	286	561
NØEFT	801	179	802	-----	1782	1067
NØEFY	329	67	336	-----	732	1007
NØFOC	8	6	6	0	20	130
(WA7AAJ)	0	19	0	19	38	3
NØASM	16	6122	6127	14	12279	0

JANUARY

NOEFB	154	3329	3485	-----	6978	1075
NOEFC	543	307	841	-----	1691	1074
NOEPD	1200	1147	1824	-----	4171	806
NOEFJ	57	440	440	-----	937	864
NOEFL	78	54	78	-----	210	995
NOEFT	216	90	218	-----	524	1002
NOEFY	49	45	55	-----	149	812
(KP4AZJ)	---	----	----	-----	----	904
NORTW	28	5163	5091	0	10382	1017
NOFJM	38	12	0	12	50	2002
NOASM	20	2415	2490	10	4995	0

ZOV Station designation preceding this operating signal is the correct routing for this message rerouted by....

ZSO Send tapes (1...once, 2...twice)

ZAR This is my ... request (1...first, 2...second, 3...third, etc)

ZFF Inform me when this message (or message...) has been received by... (addressee designation) or by... (1...action addressee(s), 2...information addressee(s), 3...all addressees)

ZOB Take (or I will take) no further action regarding forwarding message

QLH Question

Answer, Advise, or Order

Will you use simultaneous keying on...frequency and...frequency

I will now key simultaneously on ...frequency and ... frequency