

ZERO BEAT

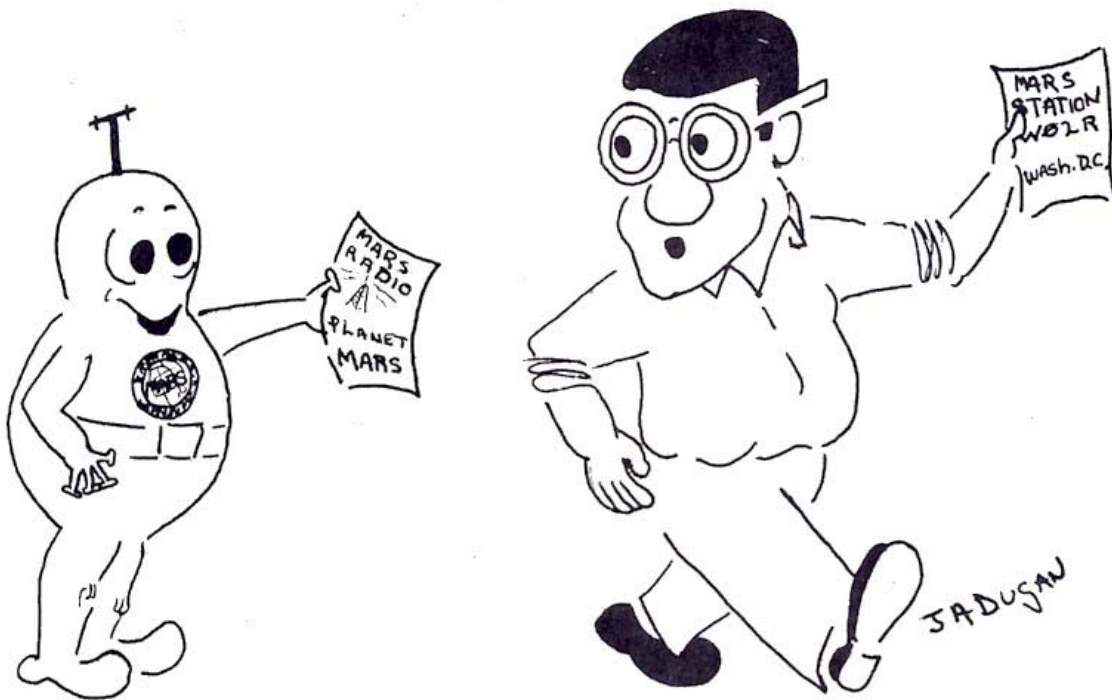
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Ye Ole Editor...

Wes Wilson

In the past several months the need for accuracy in the handling, filing and teletype relay procedures has become increasingly necessary. It is common practice for us to try and make things easier but we must not lose sight of the over all traffic system and the requirements set forth in the DNC-8 and Chief Navy MARS NM 129-68 of January.

This editor has noticed quite a few variations from the written rule since NM 129-68 came off the press. It would be a wise move if each person associated with traffic would sit down and do some careful reading. The DNC-8 and NM 129-68 is very explicit in the methods for the originating, relaying and delivering of written traffic. It would seem that most operators think that following the traffic concept would slow down traffic and place a time burden on delivery. NOT SO ! When the first station originates by the proper format then all further relay and routing procedures fall into a systematic order.

The editors of this publication have gone to great pains to inform each major and primary traffic relay station by word of mouth and by correspondence on the fallacies lying within. True, we are not perfect, but, by close scrutiny of the published documents held by each MARS station, critiques, and phone calls, we have discovered certain improper traffic handling procedures. It is therefore imperative that each Chief Operator follow published documents continuously, paying close attention to traffic relay procedures set forth there in and instruct all operating personnel on the proper handling of traffic.

(continued on page 7, right column)

Joe Says. . .

Joe Van Brocklin

March blew in like the proverbial lion in the "Capitol City". With plenty of that good ole white stuff and with temperatures low enough to freeze the brass nuts off the transmitter, we thought briefly of our com-patriots in another part of the world, languishing in tropical spendor - very briefly!!

Change 24 to the MOS manual, which contains the new MOS 8981, MARS Radio operator, became effective 15 February 1968 and is now in the field. Those interested should be able to view a copy at the company or squadron office. Some assignments of the MOS have already been de by CMC, with the remaining assignments forthcoming as fast as the administrative process will permit. A MARS monitor section has been designated at HQMC and a system for the control and assignment of 8981's is currently being established. It is anticipated that assignment of personnel to fill all established billets can be accomplished in the very near future.

It is my pleasure to inform all of you operators who are authorized proficiency pay on the basis of your primary MOS, that there will be no loss of proficiency pay while serving in an 8981 MARS billet. Change 7 to MCO 7220.12D states in effect, that personnel authorized proficiency pay in Occupational Fields 2500, 2800, 5900, and 6200 may continue drawing proficiency pay while in an MOS 8981 billet. (Have I left out anyone?)

To those Marine Corps MARS stations who are scheduled to receive centrally procured equipment for FY68, the contracts have been let with a sixty day delivery date and some shipments have

already been made. It is anticipated that the FY69 procurement will be effected much earlier in the year than was the FY68.

No specific queries, so for this month...

73's Joe

.

From the Rock

.....Don Nest

Howdy Gang,

Was very impressed with the february edition of ZERO BEAT. Looks as if we are in store for a very informative publication. Keep up the work!

You might pass on to anyone who might be interested that 0400 is awful early in the morning to be beating around the bands, especially with one or two operators at each station meeting normal skeds. In addition, the band is dead as a frozen catfish in this neck of the woods during that time. Anyone desiring Okinawa can catch KR6DI on 21.425 KHz at 0001Z (2400Z) daily. Will look forward to some of you long lost souls dropping in.

Have still received no word concerning the DNC-8's I inquired about. Would appreciate at least a QTC advising of the status. A little co-operation can go a long ways.

Just about ready to wrap the amateur radio course we have had in progress since the first of December. I have two written examinations on the way, and will give the code test to seven people (all are 2800's) tonight. Will qualify some Conditional's yet. If you can't find'em, make'em.

Guess that is about it from the Rock this month, so remember: It's nice to be important, but more important to be nice.

73's Don.....

from the managing
editor. . . .

Roger A. Smith

We are more than pleased at the response from all concerning the new format and writers of ZERO BEAT. We have a great writing staff and are on the lookout for more. We take great pleasure in adding two new writers to the staff this month. SSgt Bill Biggs from NOFAA/W4LEV answered our call for help for a WWMCTN editor. His article is well written, informative and doesn't pull any punches. (NTR says "ouch") Welcome aboard. Bill and we are going to be looking forward to your column.

Our other addition this month is SSgt Don Chilcote from NAV-14. Poor Don was worried he wouldn't get a by-line but what he didn't realize is not only will he get a by-line but we have made him a special writer for a series of articles on Navy MARS RTTY procedures. His article this month is on format line one. It is just what the doctor ordered because the Navy MARS system is undergoing growing pains. So, welcome aboard Don and we will all be looking for those informative articles.

We again want to congratulate all of the writers last month for a job well done and keep those articles coming. We were hoping to get out a personal letter to all who are writing for ZB but time did not permit it. We hope to get it out this month.

Wes leaves this weekend for the Windy City and a three week course on Teletype Corp. model 28 equipment. He has already promised that he will run a series of articles on what he will learn out there as well as information on the school. So...Wes, Good luck

As you already have noticed, ZB is

aimed at NOALM and states this in the preface. What we did not mention is that we give supplements to NOALM and as many others on our mailing list as money can permit. Last month we ran info on NOALM and a list of all effective NAVMARS. This month we were able to get additional copies of NOASA letter NM129-68. We are sending them to all NOALM stations that do not have a copy since we were only able to get twenty five. We hope to include the traffic outline and the area routing indicator map next month to everyone on our mailing list. This way along with Don's articles everyone will have an understanding of the traffic system within Navy MARS.

One thing more...We are still looking for Station of the Month articles. We need photos that are shot by ISO and not personally. The reason is simple. Did you notice the poor pictures last month? Well, yours truly, an amateur photographer did the pictures and so you can guess why they didn't come out. The contrast was not high enough. When ISO does the job the contrast of their work will yield good pictures.

The only other thing we need is a written article by the CHOP or someone designated by him. The written article is important because you can write about your station better than we can. Please don't just send us information. Also if you can get it to us thirty days ahead of time, we will have plenty of time to get it to the printers. If response to this feature drops off we will be forced to suspend it. So far the only station who has responded to the call for material is NORSE.

So we hope that you enjoy this months' edition and remember we are always looking for comments, criticisms articles and letters to the editor.

See you next month 73's Smitty.

How's Traffic ?

Oscar Shelton

The comments we use concerning traffic handling are valuable to all operators who are looking for something new and useful. The single most important passion of a traffic handler is his dedication to do a good job. The highly dedicated trafficker acquires this personal trait by self-discipline and a broad study of the work and people involved in this business. How the individual operator thinks about traffic handling will determine his usefulness to the fraternity and the station he is responsible to.

Traffic systems, procedures, regulations and demands are spelled out in so many ways an operator could spend many hours just trying to pick the useful part of many articles he may want to use for effect. While following most articles and constantly trying to improve my individual touch for this public service type work I find one hard fact keeps coming back after all else has passed before the eyeballs.

THINK POSITIVE

When an operator has sold himself concerning the traffic handling business only then can he expect to be proficient enough to gain the recognition he wanted in the first place.

This column is intended to cause the traffic handler of our small group to think about some of the fine points of traffic handling so the following questions are selected for your thoughts and consideration. No scoring is necessary. Just answer the questions in your own mind and then think about the answers.

1. Are you a member of the ARRL?...
2. Who is your SCM?.....
3. How can you win a BPL medallion?
4. Do you belong to as Amateur Radio Club?
5. In your opinion: what is the most difficult part of traffic handling?..
6. How many pages of instructions in DNC-8 are devoted to message procedure?
7. What do you like best about your job as a traffic handler?
8. Should we set a standard time for message traffic to be delivered?....
9. What frequency would you use to start a traffic net on CO meters?...
10. Who would you recommend for an operator of the month award?
11. Do you get a reply message when delivering messages?
12. Does your station have a training program for present and future personnel?
13. How many frequencies do you work on MARS?
14. How many times would a message counted in its route over the present MARS system from Chu Lai to Albany, Ga.?....
15. Do the people in your area know where your station is located and why it exists?

The answers you choose for the above questions are not required for grading by an official or critic; just yours to think about. Remember.....

The INDIVIDUAL OPERATOR on the air will determine the character of the station he operates.

So till next month THINK POSITIVE and drop me a line at N0RSE/W6IAB.

73's Oscar,

Push-Pull Charlie



Bob Rotella

Hearty hello to all from this corner of ZERO BEAT. Glad to be with each of you to discuss and talk a little on the phone patch activities we are involved in.

First of all, to introduce myself, the name is MSgt Bob Rotella, the CogO is WO R.C. Gillespie and the Spl Svc's officer is Maj R.J. Wolfenden. The location at present is Bldg 340, Depot Spl Svc's, MCRD, San Diego 92140 and the AV is 6724681/5153. The call sign of NOPPC is one that will be given to the individual being selected for that job and could be assigned to anyone, at any place, at any time, the selection being made from the Office of Chief Navy MARS.

The position is like most in the program; a designation of an individual to assist if at all possible, control in a limited degree, coordinate amongst all, offer beneficial advice, accumulate various information, comments, suggestions, gripes (if any) and offer a corner for any/all to call or go to. It helps ease the overwhelming abundance of activity already at hand in Chief Navy MARS office, sort of a sublet office out of the office, hi

I hope to deal with the normal or average workings of the phone patch activities within this column, such as freq's, limitations, district coverage, names, locations, stations, addresses, phone numbers, requests and denials. Some aspects of this activity I will NOT get into because some things I'm not overly familiar with or the echelon of activity is beyond me, such as Navy Freq

Panels, Faupaus and Irac. Chief Navy MARS office handles those headaches, so we layman need not be concerned with that form of the activity. We will attempt to take care of the average stations work, the involvement of the daily Job and some of the not-so-technical phase of the phone patching.

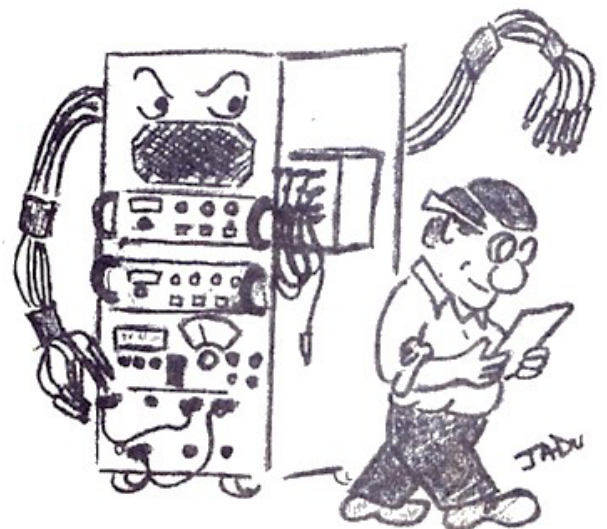
Call me if I can be of assistance to you. If we cannot seem to take care of the matter with what we together know then we will go to the front office for more, updated, and concrete information pertaining to the problem. We will give the NAVMARS Liaison Officer another chance to use one of his many acquired remedies for "the solution" if there is one at hand.

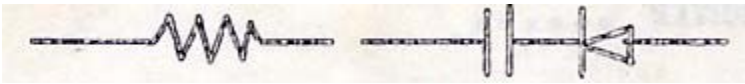
With this information at hand, we can get into the meat of the thing and start out fresh in the next column. Glad to be with each of you, hope to hear from you (good, bad or indifferent) and till next time, 73's

Bob NOSUZ/WB6OPA

NEXT MONTH Requesting Phone Patch
Activity

Kill A Murt





TEK-TALK

Roger A. Smith

A number of stations have been able to obtain some of the model 28 Reperforator-Transmitter (RT) sets at 100WPM that Navy MARS received from the State Dept. This month we will cover that unit and in particular the TD unit that seems to be giving everyone a hard time. The TD is called the LAXD. The LAXD is a climbing or pivoted head TD and is usually used together with a typing or non-typing reperforator. It is able to sense or read the last character that the reperforator has punched.

There are two clutch magnets (see diagram) in the LAXD TD. One is called the reader and the other the distributor. They are both 200 ohms and need 160 MA to close them. Teletype Corp. says 48V direct current is required for each one. Now before you go run and connect them in series, read on.

The thing that confused most, including myself, is that the clutch magnets can not just be connected together. (for example..in series) The important fact that was discovered before I had any diagrams is that: the reader clutch magnet and the reader cam shaft together with the distributor clutch contacts control the distributor clutch magnet. This means that BC15 and BC22 (see diagram) must be connected in series with the distributor clutch magnet circuit. This is very important, otherwise the unit will not function properly. As you can see 1000 ohm 5 watt resistors were added to each circuit (see figure 2) to inable the circuit to work on 115 VDC. If you have 48 VDC, the resistors can be removed. I have not tried the unit with AC. If anyone does and it does work let

me know. The transmitter stop contact (BC25 and BC26) it the control which stops the pivot head when it hits the reperforator punch block. The trans aux. (BC13 and BC24) and dist. aux. (BC 9 and BC8) are not used. They are intended for two cycle operation. Can't think of another use for them. If anyone finds a use for them let me know. I think figure 2 should pretty well cover the TD control circuits.

The only other circuit is the signal line. The code reading contacts must be connected in series with the distributor contacts as shown in figure 3. All of the connections for the TD are brought to a 32 pin connector (female) on the back of the base of the RT 28 unit.

The reperforator LPR is also terminates in a 32 pin female connector on the back of the RT 28 unit. The only connection that is necessary is the signal line to pins 14 and 15. The selector magnets can be connected in series or parallel depending on which you use. (60 or 30 MA) 60 mils is common so you will probably want them in series.

I suggest that a power supply giving 115 VDC at 300 MA be constructed and all of the connections for the unit be made in the power supply. A male plug can plug into the unit and the other bought to the power supply and terminal strip. The signal line might be brought to a female phone jack for patching into the other TTY circuits in the shack.

We are using two of these RT 28 units here at NAV-2 with very good results. The storage bin is great for storing up to thirty messages of average length for later transmission. We do not use the tape winder because it curls the tape and makes it very hard to retransmit. We let it fall into a plastic waste basket. We were lucky to obtain a cabinet that houses two of the units with power supplies. A great deal of

modification was necessary to the cabinet. I am going to make this info available to NORTP/W4PFC as soon as I get them into a finished form. They are the only other ones I know of that have a cabinet,

Well that is all for this month. I am waiting to see how many of these good units are brought into service. I am also looking for an editor for this column. Drop me a line.

73's Smitty.....

from Jim at NORTW. . .

Things were going along pretty good until Larry Matthes WA6NFQ, got orders to Hawaii in his primary MOS 3531. So with that and other changes we are back down to a three man crew and expanded skeds. Just when we thought we might start getting some time off but thats the way it goes. We started two new skeds into RVN one on 15 meters and one on 10 meters. The ten meter shot is outstanding for three solid hours of patches but the 15 hasn't been working out to good as yet. IG is next week and we are all going to be in that luckily at different times so we should be able to make all our skeds. But if we are late for one have patience. In all we have been busy here on the desert and next month should be even better, 73's

Jim WB6VTS/N0IKA

Ye Ole Editor continued.

This editor will depart NAV-2 on 16 March for Chicago, Ill., where he will attend a three week maintenance course on model 28 Teletype equipment. In following issues of ZERO BEAT articles concerning teletype maintenance will be included. Until next month, best of 73's and lots of traffic.

Ye Ole Editor

Transmitter - Distributor LAXD

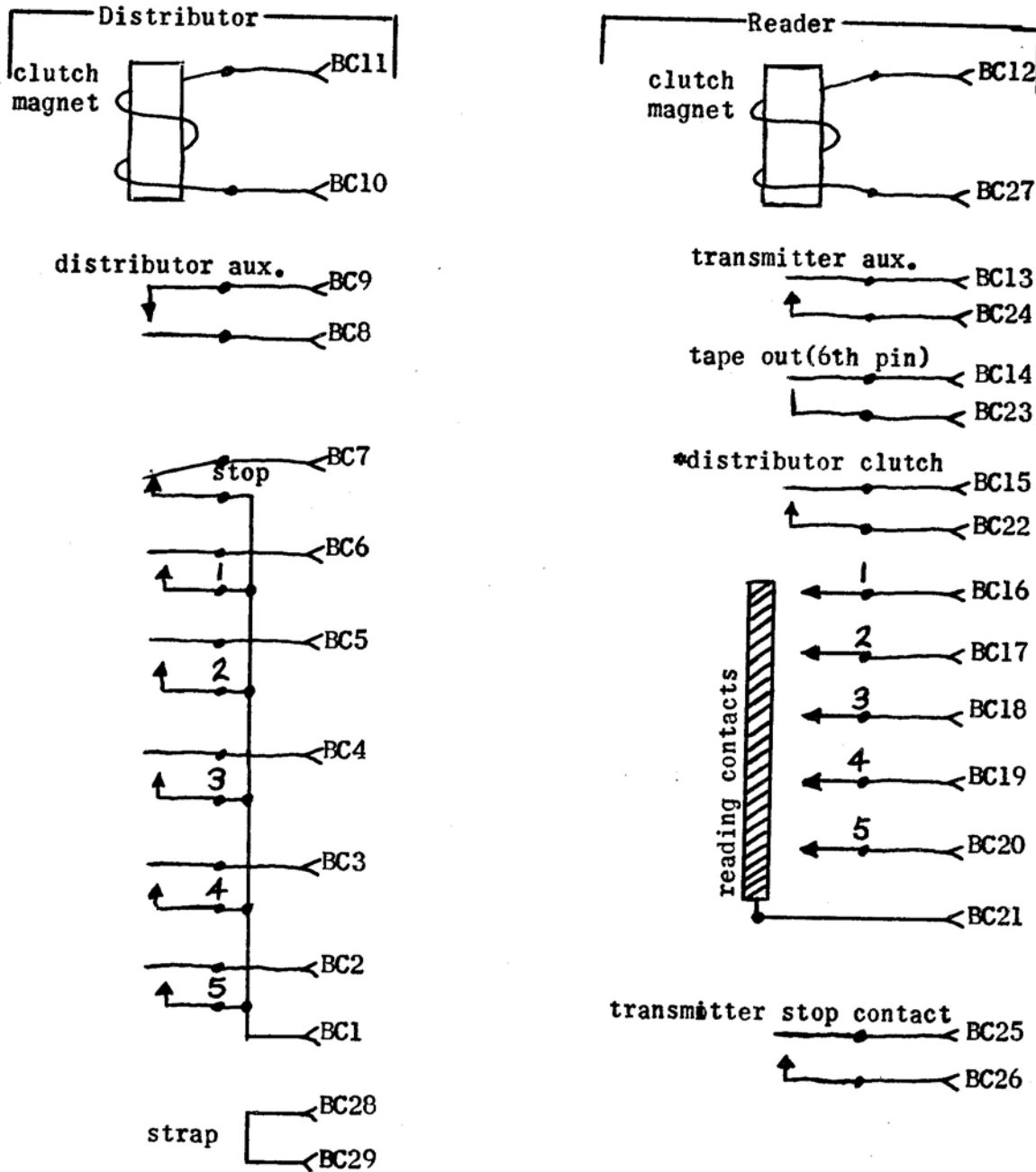


figure 1 *see text

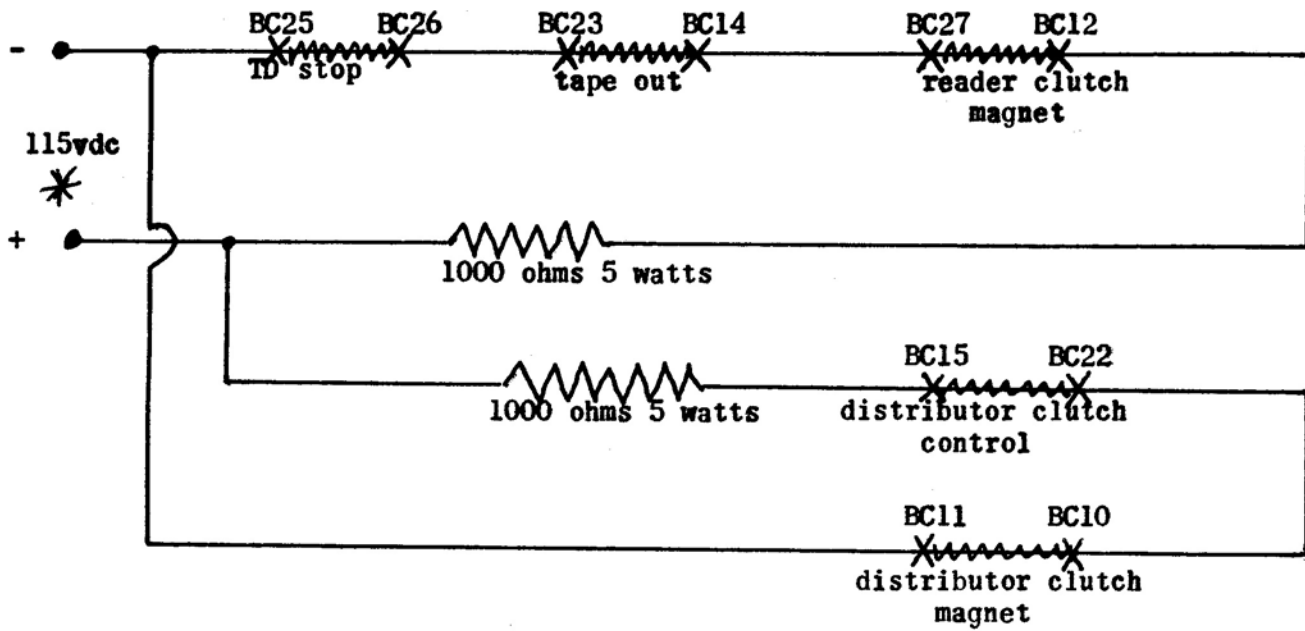


Figure 2 TD control circuits

* AC maybe tried. No STOP-START switch is shown. Simple SPST switch can be added anywhere in Reader clutch magnet circuit. Distributor clutch magnet will automatically open when reader line is open.

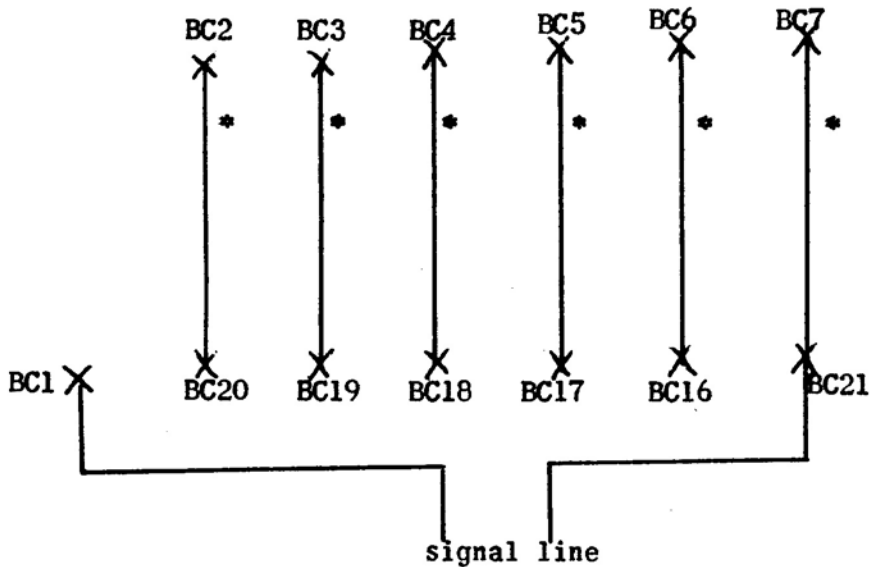
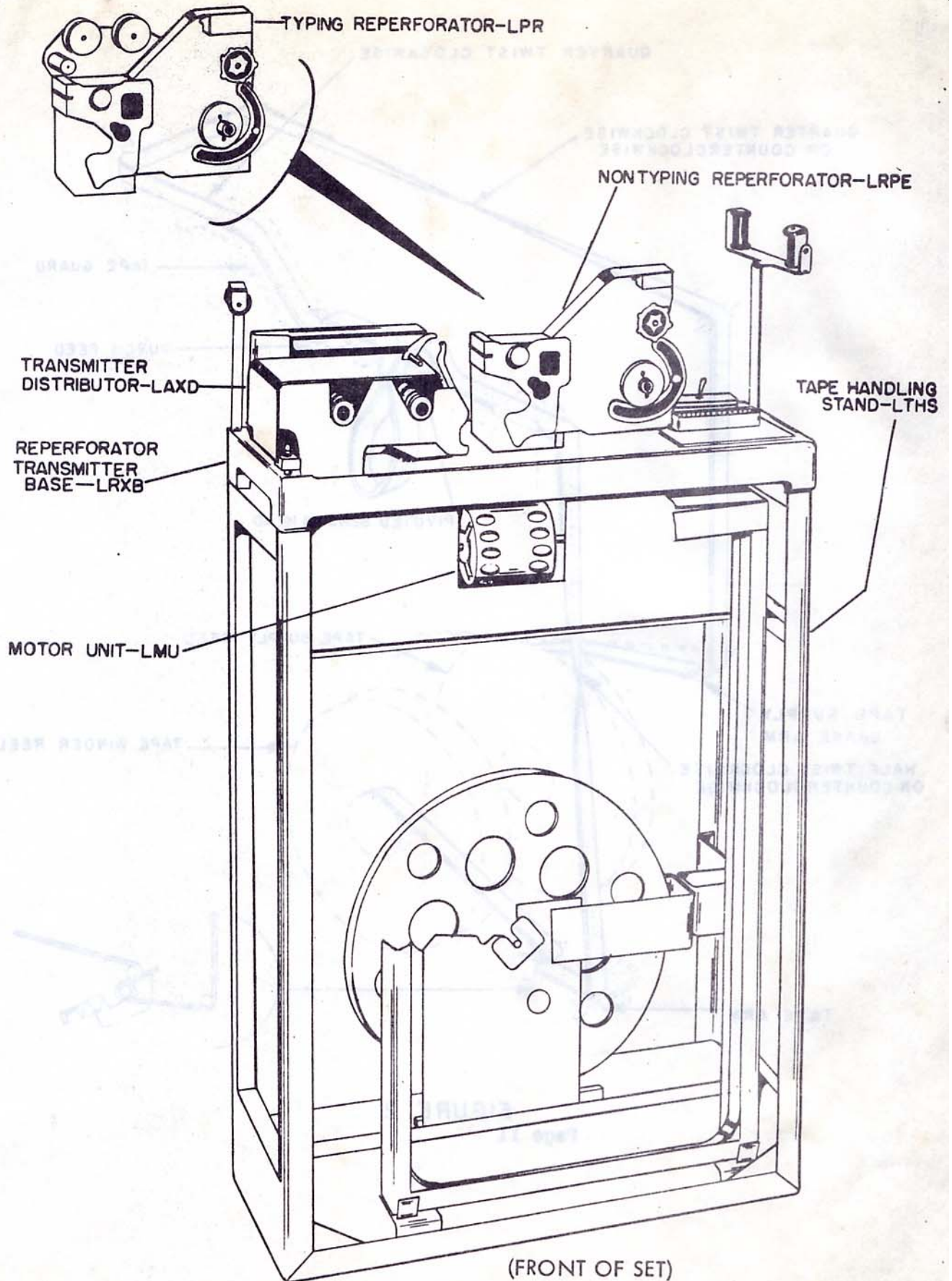


Figure 3
Signal line connections
for LAXD TD.
*jumpers



TYPICAL ASSEMBLY OF REPERFORATOR TRANSMITTER SET COMPONENTS

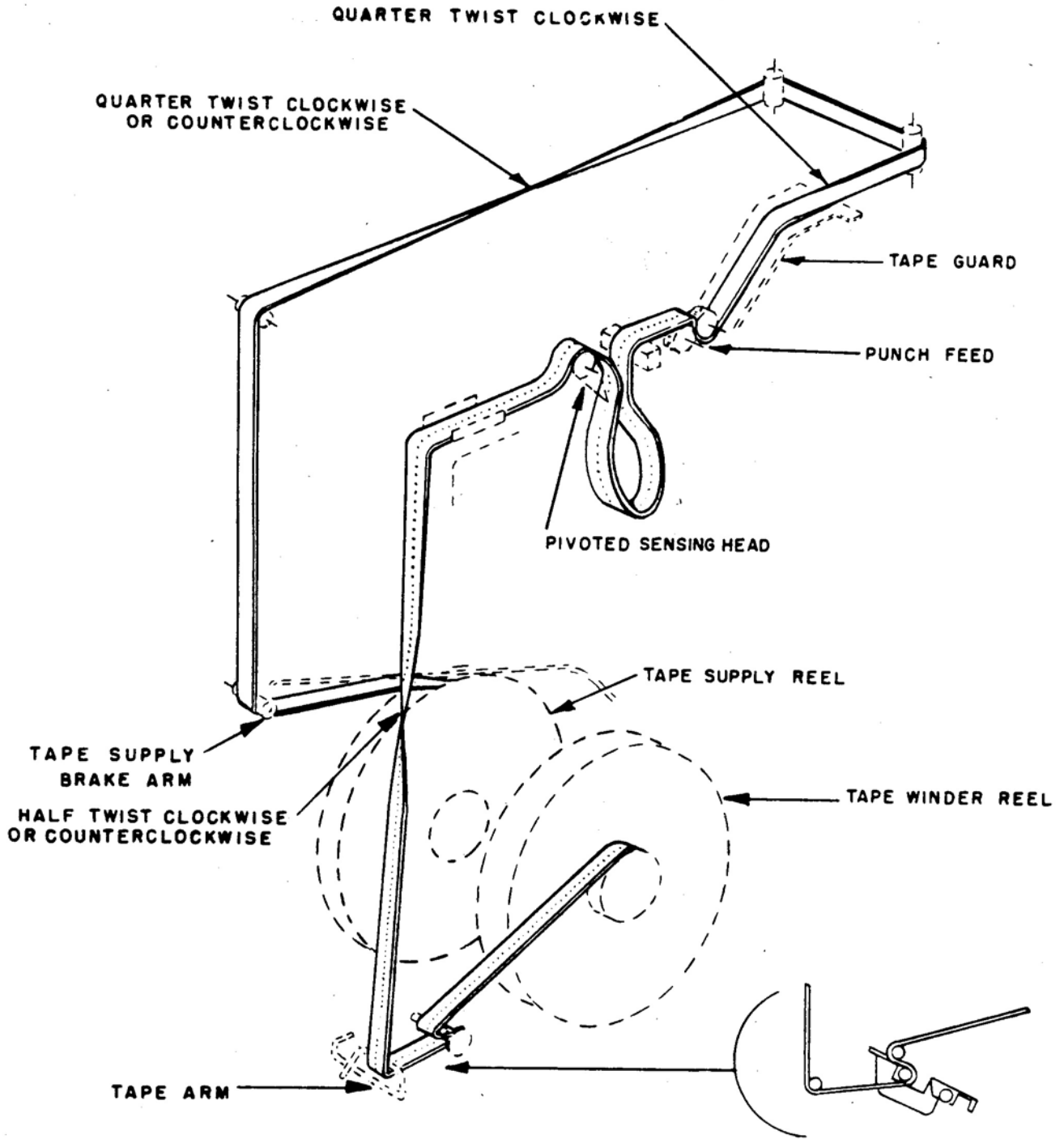


FIGURE 2

Navy MARS Radio Teletype Relay System

Don Chilcote

First off let me introduce myself. The handle is Don and I hold the following calls: N0ZGL, KH6GKV and WB6TKJ. I have been in Navy MARS about two and one half years and active in the Marine Corps system since June 1966. I worked at N0EFD for my tour in Vietnam and am presently the only Marine at NAV-14.

I am writing this article, which will be the first of a series, to try and give a little insight on the Navy MARS RTTY Traffic System and the message format used there-in. I by no means claim to be an expert on the subject but feel I have as good an understanding as anyone on how it works and the principle behind it.

The message format used is the same as in Naval Communications, adopted from the DNC-5(C). The TTY procedure was taken from the ACP-127 (current edition). Both of these books are the guidelines or the Navy MARS Tape Relay System.

At present, the biggest hang up seems to be with the format line one, or as it is better known, the pilot line. (see 641 of NM 129-68) To explain how this works you first must understand that all point to point RTTY circuits have a channel designator. Alfa channel is between WESTPAC and Hawaii, bravo channel is between Hawaii and the west coast, etc. All circuits are identified by channel letter. (see enclosure 3 of NM 129-68)

Let us take a message originated by N0EFB and destined for Chief Navy MARS and follow it thru the various relay stations. The purpose of this is to show how line one expands and tells the exact path the message followed.

Assume this is the first message N0EFB originated this day and to make

matters simpler, the first for each relay station. N0EFB starts the message with the following: FBA001 followed by five spaces, two carriage returns and one line feed. (called a SON) The FB is the last two letters of his station routing indicator and alfa being the channel designator between Vietnam and Hawaii. The message is received by NAV-14 and retransmitted to NORSE who is the relay station for traffic going to Washington, D.C. Upon leaving NAV-14, the pilot line looks like this: SLB001FBA001 five spaces, two carriage returns and one line feed. The SL being the last two letters of NAV-14' station routing indicator. (see 640 NM 129-68 station routing indicator) (NAV-14 can not be used because it contains numbers, so NOASL is used with SL being the last two letters) The bravo being the channel indicator between Hawaii and the west coast.

The message received at NORSE is prepared for relay to NAV-2, who guards for NOASA. The channel designator between NORSE and NAV-2 is tango, so upon leaving NORSE the pilot line looks like this: SET001SLB001FBA001 five spaces two carriage returns and one line feed. NAV-2 adds SME001 and so when the message reaches NOASA it looks like this: SME001SET001SLB001FBA001 (SOM)

The purpose of all this is to facilitate using torn tape relay. In this system the machine automatically adds the last letters of the station routing indicator, a letter to identify the channel between stations and a three digit number starting with 001 (whole thing called a channel number, see NM 129-68). If the copy from the sending station is good you need only reperate a tape off his signal and feed each message singularly into the machine and your part of the pilot line will be added to the message before that of the other relay stations. You end up with a new tape with your pilot on it and

pilot of all other relay stations that have handled the message prior to you.

I hope this has helped some of you to better understand how the pilot line works and the reason for it. In later articles I will explain the complete RTTY format and offer from time to time little pointers on how to improve the RTTY relay system. For this month I have one pointer to offer. Try to limit the number of paragraphs used. It is not necessary to start a new paragraph for each ARL numbered text. You don't have to have a separate line for the signature either. The fewer paragraphs you have the fewer characters you have to type and the faster you can get your traffic out.

See you in the contest..73's Don.....

.

World-Wide Marine Corps Traffic Net

Bill Biggs

An editor, we are not but due to an abundance of time on my hands due to the severe shortage of traffic at N0FAA/ W4LEV I have done what my grandpappy always warned me about and that is volunteering!

In all seriousness, we as Marines and amateurs have a responsibility which we have neglected in the past. Many of us have not even been aware that we're at fault. What I am speaking of is the lack of participation on "our" net. This could be a time for all the "ole-timers" to look back on the meager beginnings of the "system" and recall that if it hadn't been for the many traffic handlers (civilian amateur type) that wished to help Marines with phone patches, advise, messages and connecting us with our loved ones from Okinawa, Hawaii, Dominican Republic, Cuba,

Vieques P.R. and ship board, we would not have been able to have advanced to the sophisticated state of "professionals" which we now hold.

These hundreds of people that helped us in the past now need our continuing support in the form of the World Wide Marine Corps Traffic Net. Those of you who have never had the pleasure of checking into "our" net shouldn't put it off for another schedule...Do it now!

In order to help us and get things back on an even keel, I do need some information. Primary I would like to know who was the last net manager (if anyone knows) so I may contact him and get the records going again. Dick Dean who will be retiring in the near future has graciously consented to hold down the net managers spot and he has got to have something to go on. So any help would be appreciated.

I won't go into all the WWMCTN can do for your individual station as in each instance the situation will be different. What I will do however, is encourage you to be up on 21429KHz at 1900 GMT daily Monday through Friday and see for yourself just how you can assist and be assisted. An example of what the net is doing is seen in the net report for the last two weeks.

256 check ins from over 15 countries

63 phone patches completed

75 QTCs cleared

So what say out there...The next time you sign with someone how about making that departing remark.....

"see you on the Marine Corps Net" see you next month...

73's Bill

Traffic Report for February 1968.....for N0ALM

	ORIG	RCVD	RELY	DLVD	TOTAL	TOTAL P/P
N0AMC	4	8	80	0	92	0
N0ANP	115	2671	2613	58	5457	0
N0ASM/NAV 2	81	2622	2610	66	5243	182
N0EEM	No report received this month					
N0EFA	No report received this month					
N0EFB	No report received this month					
N0EFC	No report received this month					
N0EFD	No report received this month					
N0EFJ	No report received this month					
N0EFL	No report received this month					
N0EFY	No report received this month					
N0ENV	20	62	71	12	161	291
N0ETG	41	299	199	100	639	189
N0ETH	86	6	0	5	97	7
N0ETJ	1	2	0	2	5	0
N0ETL	0	0	0	0	0	0
N0FAA	18	435	406	13	872	432
N0FJM	0	4	0	4	8	516
N0FOC	No report received this month					
N0IVT	3	6	3	6	18	222
N0IXF	21	542	536	18	1119	1
N0IZG	0	4	0	4	2	295
N0RSB	No report received this month					
N0RSE	25	1890	2031	42	3996	1169
N0RTP	109	378	353	17	857	0
N0RTW	17	65	47	17	146	1083
N0TEF	-	-	-	-	80	705
N0XXN	5	114	111	1	231	0

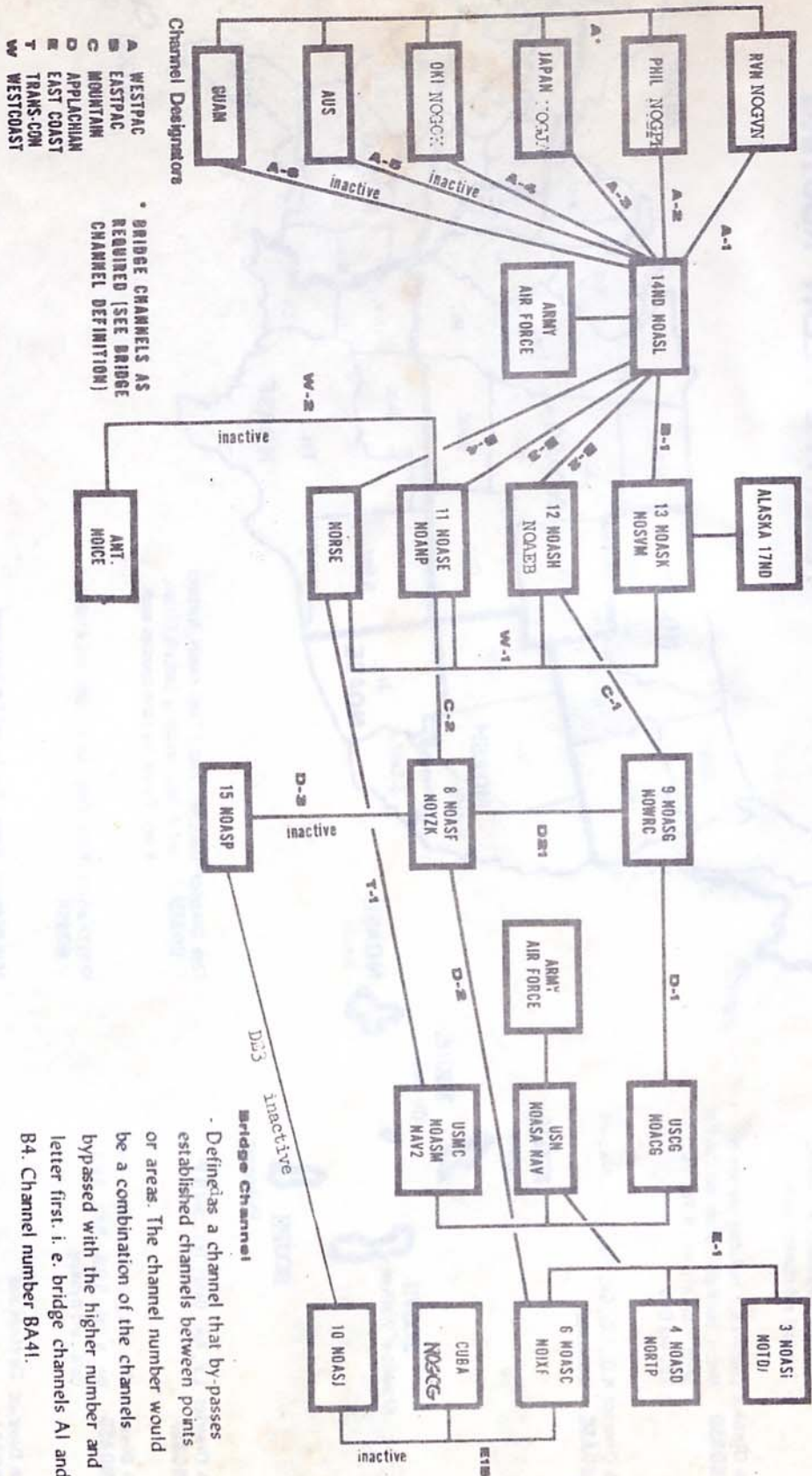
Note: N0ETI and N0ETK are inactive. Parris Island has no MARS station.

Traffic Reports for February 1968. for amateur operations N0ALM

	ORIG	RCVD	RELY	DLVD	TOTAL	TOTAL P/P
W4BHU	0	55	55	0	110	4
K4BUJ	0	0	0	0	0	0
W4LEV	9	43	61	5	118	10
K4MCL	1	432	344	6	783	2
W4NTR						
W4PFC	146	242	290	30	508	4
KG4AM	0	2	0	2	4	487
KP4AZJ	2	2	2	2	8	62
KA5MC	0	0	0	0	0	0
W6FCS	No report received					
W6IAB	-	-	-	-	50	25
K6MCA	-	-	-	-	30	200
W6YDK	6	205	201	4	416	56
W6ZJB	2	3	1	2	8	563
KH6AJF	No report received					
KH6BGS	0	1	0	1	2	198
KR6DI	7	2	1	0	10	284
KR6GF	15	31	17	14	77	323
KR6MB	15	0	2	0	17	285
KR6MH	3	2	0	2	7	906
WA7AAJ	No report received					

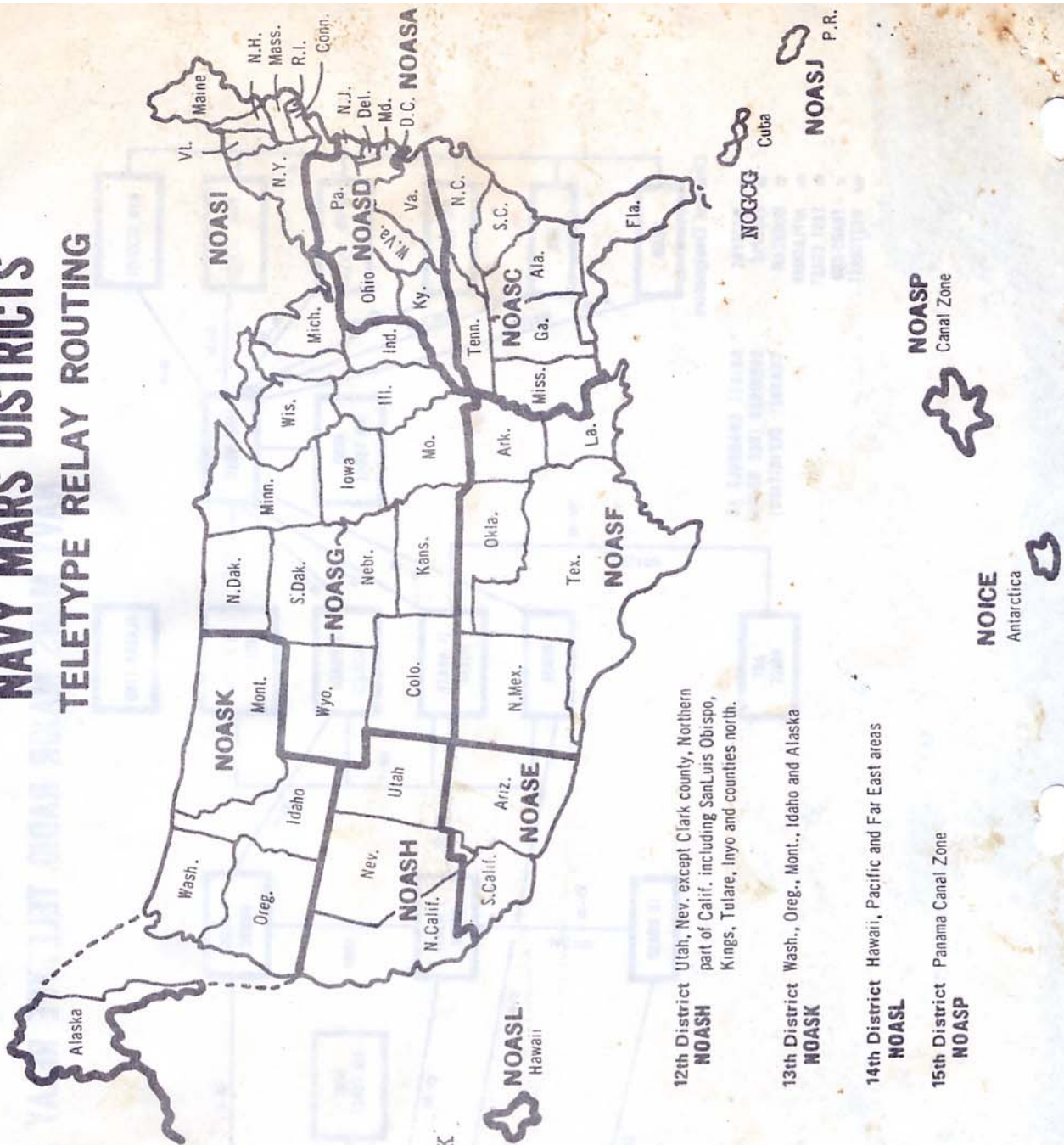
Note: KR6CP and KR6MD are inactive.

NAVY MARS MAJOR RADIO TELETYPE RELAY SYSTEM



NAVY MARS DISTRICTS

TELETYPE RELAY ROUTING



3rd District Maine, N.H., Vt., Mass., R.I., Conn., N.Y., Northern N.J. including the counties of Monmouth, Middlesex, Somerset and counties north.

4th District Southern N.J. including counties of Mercer, Burlington, Ocean and counties south, Pa., Del., Md., W. Va., Va., Ky., and Ohio

5th District N.C., S.C., Ga., Fla., Tenn., Ala., and Mississippi

NOGJA Japan

NOGVN Republic of Viet Nam

NOGPH Philippines

8th District La., Ark., Okla., Tex., and N.M.

9th District Mich., Ind., Ill., Wisc., Minn., Iowa, Mo., N. Dak., S. Dak., Nebr., Kans., Colo., and Wyoming

10th District Caribbean area

11th District Ariz.: Clark county, Neb.: S. Calif including counties Santa Barbara, Kern, San Bernardino and counties south

12th District Utah, Nev. except Clark county, Northern part of Calif. including San Luis Obispo, Kings, Tulare, Inyo and counties north.

13th District Wash., Oreg., Mont., Idaho and Alaska

14th District Hawaii, Pacific and Far East areas

15th District Panama Canal Zone

NOICE Antarctica