

**THE WA8BXN MSYS PACKET BULLETIN BOARD SYSTEM  
USER'S MANUAL**

By Steve Wolf, NO8M @ NO8M.#NEOH.OH.U.S.A.NA

December, 1994

Version 1.18

Please copy it and pass it around!  
(Keep the credits and trademark notice!)

Additions, corrections and suggestions:  
Steve Wolf, NO8M  
27132 Butternut Ridge Road  
North OLMSTED, OH 44070-4417  
NO8M @ NO8M.#NEOH.OH.U.S.A.NA

MSYS is written by Mike Pechura, WA8BXN, and is copyright 1994 by HUB COMPUTERS, INC.

It is distributed free for amateur use and can be obtained by various means including the Cleveland Hamnet BBS in Cleveland, Ohio (216-942-7516 - 9600/2400/1200 baud - RBBS) and by anonymous ftp to [137.148.21.6].

## THIS MANUAL

This manual is intended to be a reference to the many commands available in the MSYS PBBS. It will not teach you how to operate the board efficiently you will have to experiment with it. It will give you the tools to experiment.

## COMMON ERRORS

The misspelling of a file name you are attempting to download is one of the most often observed errors. The improper use of subdirectories is a close second.

The use of the wrong command is another "most often made". If you find yourself in a bind, check the command description in this manual.

Another common problem is attempting to use the nodes without giving a port number. You must give a port number to connect from the nodes.

Any traffic moving off the board should be signed with your call and your home PBBS, like this:  
"KA8ZVV @ NO8M.OH.USA.NA"

A send to a station must contain the exact callsign of the person you want the message to go to. If you send a message to KA8ZZV rather than KA8ZVV, your station will never get the message.

The sysop is more than happy to answer your questions. Please don't hesitate to leave a message to the call of the PBBS asking about your problem!

## PRINTING THE MANUAL

The manual can be printed by using the DOS command

```
TYPE USERMAN.DOC > PRN
```

KA-Node, KAM and KPC-4 are trademarks of Kantronics, Inc.  
NET/ROM is a trademark of Software 2000.

IBM is a trademark of International Business Machines Corp.

## STRUCTURE

### MULTI-USER/MULTI-TASKING

The board is a multi-user system. Many stations can be connected at once. It will support many connects on many bands. This is normally transparent to the user. However, during prime time, you might observe some slowing. Even if you hear nothing on your frequency, the board might be up to its ears in tasks on other frequencies. Disk reads and writes will also slow a response.

### HOUSECLEANING

The board will automatically kill messages after a certain time period. Decisions about what is kept and what is killed are made by the sysops. Should you be out of town for a long period of time, you might ask the sysop to hold your mail.

### BACKUPS

Every message gets copied to a backup file. Should the board crash the messages can be restored. If a message that you have already read and killed suddenly reappears, it may have been restored after a crash.

The board is very stable if run with a conservative attitude. Normally sysops will tweak and tune to get optimum performance. They will experiment with other ports. They will not act conservatively.

### SECTIONS

There are four basic sections. There is a message section, a download section, a TCP/IP section and a user services section. The message section is capable of delivering mail and bulletins almost anywhere in the world. The download section contains information held for reference and training. The service section provides a node and conference that enhances the value of the software. Send a message to the callsign of the PBBS for more information on the TCP/IP section

## THE SERVICES SECTION

### The Conference

#### K-Node

#### Network Node

## THE CONFERENCE

Normally, only two amateurs can connect via packet radio and hold a conversation. Three or more can talk in the converse mode but will be forced to disregard all other traffic on the channel. MSYS provides a means by which any number, depending on channel congestion, can talk.

To enter or start a conference, you must connect to the PBBS. From there you issue the conference command. Every packet you send will be received and acknowledged by the board. It will then send your packet and receive acknowledgement from every other user.

The first packet received from a user will be prefaced by the user's callsign. If the next packet sent is from the same person, the callsign is not included.

Overhead (channel usage) is very high for a conference. However, if the local area network (LAN) is on a clear channel, it will support many users.

You might be asked to join in a conference. Do it! If you get a message that says that someone would like you to join a conference, type the letter C.

## THE K-NODE

MSYS provides the user with two types of nodes. An almost down load sections. For now, suffice it to say that a node acts somewhat like a repeater, extending the range of another packet station.

One MSYS node is called a K-Node and operates much like the Kantronics KA-Node. They may also provide digipeating and gateway service.

To use the K-node, you must first connect to it. It will have a different callsign than the PBBS and will normally use an alias. The ID command, described later, will let you know the call of the K-Node.

The following K-Node commands are available:

- Bye ----- This is used to disconnect from the K-node.
- Connect --- This command allows the user to connect to another station. Two additional items, a port number and a callsign are necessary. They MUST be included. The ID command, described later, will tell you what port number is attached to what frequency.
- C# call -- Connect on port # to call, PORT NUMBER IS REQUIRED!
- Help ----- Help.
- Just Heard --What stations the K-node has heard. This list is much more limited than the command on the PBBS. It will also take an operand port number.
- Node ----- This lists K-Nodes heard and will take a port number operand.

## THE NET NODE

The NET NODE is different from the K-Node in that the node listens to the frequency and logs what it hears. If it hears another node, it logs that node as a "route", a node that it can directly connect to. It also logs the nodes that route can hear. It compares the other nodes with what is in its log and figures out the best path to a destination.

NET NODES only talk to other NET NODES, NET/ROM nodes, TheNet nodes and other versions of the network nodes. They will typically have a callsign with SSID and an alias. Many have rather strange numbers as alias names. This number represents the node's identifier when used with the TCP/IP protocol.

The following network node commands are available:

BBS	Connect to the bulletin board.
B<ye>	Disconnect
C#	Connect on port # to call (# is unnecessary for known nodes)
C<onnect>	To name or call --- for known nodes
H<elp>	Help
I<nfo>	Basic information about the node
K<Node>	Lists the K-Nodes that are known
J<ustheard>	What has been heard (a limited output)
N	Lists the network nodes that are known
N call	Information about a specific node
P<orts>	The port numbers of the node and the PBBS
R<outes>	To nodes that can be directly connected to
R call	Routes from a particular node
T<alk>	Page the Sysop
U<sers>	Info on users/node connected to the node.

## THE MESSAGE SECTION

Messages from user to user and bulletins appear here. The board is capable of routing messages to almost anywhere in the world. The bulletins carry info that you may not otherwise see until the magazines come out.

## CITY, STATE and ZIP

If you are entering a message for another party and the route has not been proven by a number of other messages that have made the trip, please put the City, State and Zip code in the title line of the message. It will really help the routing of your message should it get hung up somewhere.

## HIERARCHIAL FORWARDING (Routing Messages)

Let's say that your friend in Tahiti, French Polynesia, wants to send you a message. The local PBBS might not know that NO8M is in Ohio. It might not even know how to get traffic into Ohio. However if the message is sent like this: SP WB8RNI @NO8M.OH.USA.NA the message should have no problem.

The local board will look at the @PBBS line and see if it knows how to route to NO8M. If it does not, it will look at the OH to see if it knows how to get traffic into Ohio. If that fails, it will see if it knows about the United States. If nothing else, it had better know about North America!

See, nothing to it! Your PBBS knows all about the PBBSs in your state. In fact, you can verify in-state traffic will be routed by using the PF command. The board will come back and say to where your traffic will be sent. In the United States, your PBBS should recognize a PBBS callsign and respond with a routing like KY.USA.NA.

If it does not, and you are SURE that the @PBBS given is a forwarding PBBS, then you may send it by adding a two letter state abbreviation after the @PBBS call. In this way, MSYS will send the traffic to a forwarding PBBS in that state and let that board figure out what to do with it.

For international traffic that you are not sure of, please send a message to the call of the PBBS and inquiries will be made in order to obtain the proper routing.

## DATABASE

MSYS has the facilities to maintain a number of simple databases. Adding to a database is done like this:

Line entered	Explanation
=====	
SP MSYS @ thatbbs	A message to the PBBS.
DBA 3	(title line) Add to database
#3.	
wind damage, Mentor, Ohio \	The "\" character
large tree down at 615 & 20 \	causes one line after
reported by Mentor PD \	it to be listed
A no injuries	with the original line.
/EX	"/ex" to end.

Now if a search (GREP) on database number three were used on the string "Mentor, Ohio", all four lines of the message would be sent. GREP can be used on all files ... PBBS lists, club rosters, hazardous materials lists, etc.

## MSYS COMMANDS

**Abort** ----- This command stops the PBBS from what it is doing. For example, you have asked it to list all the messages. After about 300 messages you decide you have had enough! Issue the Abort command. It also works with reading messages, downloads, etc.

**Bye** ----- This disconnects you from the PBBS. It resets your statistics, too. If you just disconnect or go away without disconnecting, the PBBS will assume you ran into trouble and log the disconnect. For example, on Monday you check-in and read all the new messages. You then disconnect without using the Bye. Then, you check in on Tuesday. You issue an L (list since you were last on). Since the PBBS ignored your Monday connect, you will get the messages since you last checked in and the messages you read on Monday. Now, had you used Bye on Monday, your Tuesday check-in would have given you just the new messages.

**Conference** -- The conference allows as many users as desired to connect with each other. The best way to understand it is to try it with a friend. The first time you talk, your line that is sent will be prefaced with your callsign, like this: NO8M: If the next line does not have a callsign in front of it, then it came from the same station. Inside the conference you can use the following commands (send a control-Z by pressing and holding the CONTROL key while tapping the Z. Release both.

```
/ex ---- To return to the PBBS (or ^ZQ)
^ZH ---- Help
^ZU ---- List users and their channels
^ZA # -- Ask user on channel # to join conference
```

**Download** ---- To download a file. You must enter the full name and directory that you obtained from the What command or from a list describing what is available that is sometimes available. To download a file in a subdirectory, use this: D subdirectory/filename. So, to download the file APPLICAT.INF in the NCARC directory, you would issue the command "D NCARC/APPLICAT.INF".

**Grep** ----- This command searches a file for a given set of characters. First just enter a G. The board will ask for a filename. It is asking for something in the download section, that you get with the What command. It will then ask you for the string you want to find. Let's say you want to search NCBYLAWS.DOC for the string "election":

G(ENTER)NCBYLAWS.DOC(ENTER)election(ENTER). The board will then send you all lines that have "election" in them. The command does not recognize wildcards (\*/?). If you do not specify a file, the default of DATABASE.0 will be used.

**Help** ----- A short list of commands.

?x --- A longer explanation of the command, use ?x where x is the name of the command. I would use the command ?L to get help on LIST.



**Info** ----- This gives information on the system's hardware.

**ID** ----- This gives you the callsigns, ports and other information connected.

**Just heard** -- This gives information about stations that the PBBS has heard. If the call is a funny alias, the sponsor's call is given inside the curly brackets. If you want to connect to someone like that, don't use the sponsor's call, use the alias. Use the Path command to determine how stations were connected to the PBBS. You can also limit the output with a channel number, like this: JK 0 ... this lists all KA nodes heard on port 0.

**JB** -- BBSs  
**JD** -- Digipeaters  
**JG** -- Gateways  
**JK** -- KA nodes  
**JM** -- Other MSYS PBBSs  
**JN** -- NET/ROM nodes  
**JT** -- TCP/IP protocol stations

**Kill** ----- This deletes messages. You may kill a number of messages at the same time: K 2 34 556.

**KM** -- Kills messages addressed to you.  
**KT** -- Kills NTS traffic you are going to deliver.

**List** ----- List is used to give you the headers of the messages. Used alone, it will list all messages since you last logged off with the Bye command. The PBBS has a function to force all personal messages to end up as private messages. If this is on, any message sent except bulletins are changed to private.

**L** ----- List since last logged off with B.  
**L category** - List for a single category.  
**LC** ----- List categories (TO fields).  
**LM** ----- List mine, messages addressed to you.  
**LN** ----- Lists messages not yet read.  
**LT** ----- Lists NTS traffic messages.  
**LL** ----- List the last message entered.  
**LL #** ----- Last # messages.  
**LO yymmdd** -- List OLDER than yymmdd.  
**LU** ----- Lists unread messages to you.  
**LY** ----- Lists messages that have been read  
**LW** ----- Lists weather messages (type W\$).  
**L< call** ---- Lists messages from call (or alias).  
**L> call** ---- Lists messages to call (or alias).  
**L@ call** ---- Lists messages with call as an @BBS.

**L x** ----- Lists since number. For all, use L 0.

**L x y** ----- List numbers between numbers x and y.

**L"string"** -- Lists messages with the character string you specify in the title. The quote marks are required. This is case insensitive, "Yaesu" will match "YAESU", "yaesu", etc.

**L'string'** -- Lists messages with the character string you specify in the title. The single quote marks are required. This is case sensitive, "Yaesu" will not match "yaesu".

**L\$** ----- Lists type \$, list bulletins.

**Message** ----- This will send the message of the day. This message contains information on happenings. It will be sent on the initial check in UNLESS you have selected the eXpert mode. If you have, you must use M to read it. Expert users DO NOT get the message of the day!

**Name** ----- This command is used to register with the PBBS.

**N** --- First name with first letter capitalized.

**NQ** -- Your QTH, for example: North Olmsted, OH.

**NZ** -- Your zip code (only the five digit code).

**NH** -- Your home PBBS, where you want to pick up mail addressed to you. Traffic may arrive to you on other boards in your area, you may want to declare your home PBBS on those. If you change this, make sure you do it on all boards you have checked into and only declare one PBBS as your home PBBS. Otherwise, your message may end up as the potato in a game of hot-potato. One board forwarding to another and back again. Declare only one home PBBS. NH should be a full service PBBS, not a TNC PBBS.

**Path** ----- This command will tell you if the PBBS knows how to route traffic to a PBBS or if the PBBS knows the amateur.

**P call** -- If the person is known, information that was entered is displayed. This is a good way to find out someone's name, their last connect and where their traffic will be sent. A response that indicates that the person did not enter a home board and has not checked-in for a long time would indicate a message left for them might not be received.

**PF call** - This is used to indicate if the PBBS knows how to route traffic to another PBBS. If this PBBS does not know how to route to the PBBS of interest, you can insure routing by adding a two letter state abbreviation to the end of the PBBS call: KA8ZVV.OH. If you are routing traffic to a PBBS in Ohio and this PBBS does not know it, leave a message for the sysop.

**PC call** - If there is a callbook (REQQTH) server enabled at the PBBS, this command can be used to obtain information about a callsign from the callbook.

**Read** ----- This is used to read messages on the board. Many messages may be strung together: R 1 45 68. Wildcards are supported: R> DX\* will read anything starting with "DX".

R@ call - Read messages having a certain @BBS.  
 R> xxxx - Read messages to xxxx TO field.  
 R< xxxx - Read messages from xxxx in FROM field.  
 R cat --- Reads all messages in category.

**RE** ----- The read for export. This reads the message in a format where it can then be easily uploaded into a PBBS or mail drop.

**RH** ----- The read with headers. This shows the forwarding headers that are added at each PBBS as the message is sent. The routes are not the same at all times and it can be fun to see how a message got from hither to yon. If a message author did not give the home PBBS for a return reply, use this to determine where the message originated. Normally, that PBBS can be tried for a response.

**RN** ----- This reads only the text of the message and is a good way to save time on a marginal path.

**RM** ----- Reads unread messages addressed to you.

**RP** ----- Reads a message without marking it as having been read so it will be listed the next time you check in.

**Send** ----- This is used to send a message. The basic format is Sx call @PBBS. Sx is a send with the type of message it is. The @PBBS is the location where the addressee picks up their mail. Call is the exact callsign of the recipient. If you make a mistake on the addressee's call, the message will probably end up in limbo, never to be received.

**(control-A)** -- Aborts the message; to start over.

**CC callsign** -- This causes a copy of a message to be sent to the calls following the carbon copy command. The CALLSIGN can take the form CALLSIGN1@PBBS;CALLSIGN2@PBBS etc. to send the same message to many users.

**REPLY #** -- Allows the PBBS to automatically address a message replying to another message. If you add a period after the message number, like this: "REPLY #." the PBBS will also automatically enter a title for you. It will also ask you if you would like to delete the message when you are done.

**SP** ----- A personal message listed/read by addressee and author.

**SR #** -- Allows the PBBS to automatically address a message replying to another message. If you add a period after the message number, like this: "REPLY #.", the PBBS will also automatically enter a title for you.

**ST** ----- NTS Traffic. Most boards have a help file -- READ IT!

**SB** ----- Send a bulletin. Without an @PBBS, these will stay on your PBBS and may be addressed in whatever way you wish. For example, in northern Ohio, when sending a bulletin, the @PBBS field may be set to the following:

**WW** -- To quote Jim, WK8G, messages addressed to ALLBBS are, "intergalactic, omnipresent, trans-universal All Points Bulletins"! This message would go to every PBBS in the world. PLEASE USE THIS WITH CAUTION. The packet network in Guam does not want to know about your wattmeter for sale! Some areas use WW.

**ALLUS** -- This would go to every PBBS in the U.S. USE WITH CAUTION as your for sale would normally NOT be in the proper forum if sent in this manner!

**OKIPN** -- (Or your wide area flood route) Ohio, Kentucky and Indiana. Again, a message to NEOH or ALLOH is better!

**ALLOH** -- All Ohio (or ALLMI, ALLHI, etc.).

**NEOH** -- (Or your local area flood route) Northeast Ohio. This is the best routing for the "for sale" messages.

**PBBSCALL** -- For all at a PBBS.

**Talk** ----- Page the sysop.

**Users** ----- Gives the current users of the system and the number of messages. If you want to talk to someone using the board, you may want to start a Conference and invite them in.

**Version** ----- The version of the software and the date it was last started.

**What** ----- This gives a list of what is available in the download section.

**W subdirectoryname** -- Gives a list of what is in the subdirectory. W NCARC or W AMSAT/BULLS are examples.

**Xpert** ----- This sets and resets your expert status. As an expert, you get a short command prompt and do not receive the message of the day.

**X x** -- Where x is a number, sets the number of lines you receive before the PBBS stops and asks you if you want "More?". Setting this to zero defeats the "More?". Answering the "More?" with a C defeats it for that message.

**XC** -- Toggles the listing of categories when connecting to the BBS while in non-eXpert mode. In eXpert mode you never get the automatic category listing.

**XF** -- Sets the PBBS to send you multiple lines. Use this with a good route.

**XR** -- Toggles the automatic question asking if you want a reply to the message you just read. This can be useful if you get a lot of personal mail.

**XS** -- Sets the PBBS to send you one line at a time. Use this with a poor route.

**Yapp** ----- This command allow you to download a binary file from the YAPP directory. You may also upload if you have been authorized.

**YW** -- What is in the YAPP directory.

**YU** -- Upload a file to the YAPP directory.

**YD** -- Download a file from the YAPP directory.

\* ----- This makes the line after the asterisk a comment. It can be used to answer the sysop after receiving a "Message from sysop" line.

## DEALING WITH TOO MANY BULLETINS

If you live in an area that is served by a good network and attentive sysops, you may experience bulletin overload. If there are just too many bulletins coming in, keeping up can be quite a chore.

For just this reason, a number of commands are designed to help you. The first command is "LC". This gives you a list of the different TO fields in the bulletins. You can examine the TO fields and determine those that interest you.

You can then go to a specialized READ commands to read the bulletin categories you have selected.

"R> xxxx" reads all bulletins which have the xxxx you entered in the TO field.

Let's say you wanted to check all the DX bulletins on the bulletin board. You would give the command "LC" and perhaps see DX, DXING, DXER as some of the categories that cover your subject. You may then give the command "R DX\*". This command means READ ALL BULLETINS WHICH START WITH THE CHARACTERS "DX" IN THE TO FIELD. The asterisk means "everything" or "all".

## OTHER OVERLOAD HELPERS

You can also read everything from a certain author. You can use the command "R< KA8ZVV" to read everything from KA8ZVV. You can read all the bulletins sent to a certain @PBBS. You can use "R@ ARRL" to read all the bulletins sent to the ARRL flood route. "R@ ALLBBS" will read all the bulletins going to the ALLBBS route.

You can also get specific in your LIST commands. You can "L> YAESU" to see all bulletins sent to YAESU. Of course, you will miss those bulletin entered by those who own what they think are "YEASU" owners. The "L> xxxx" command will not correct for poor spellers!

## KEEPING LINE LENGTHS LESS THAN 80 CHARACTERS

There are a number of reasons you want to keep the lengths of your lines less than 80 characters. This will explain why you need to do this.

Depending on your computer, you may see 80, 60 or even less characters on your screen. This is not the line length. A line ends in a carriage return (where you hit the ENTER key). If you only have carriage returns at the end of your paragraphs, then your line length is the length of the paragraph.

## PBBS EDITORS

Let's say you enter a message into the PBBS but you have made a mistake. You signed your message in the proper manner, with the full hierarchical return address, like this: NO8M@NO8M.OH.USA.NA. But this time, you made a mistake. You entered your home call wrong, like this: NO8M@NM8O.OH.USA.NA. In these cases your sysop can edit your message and correct your error. It is easier than sending the message back to you with a note.

However, the editor on the MSYS PBBS is limited. It will work with only 80 character lines. This is to limit the code that is required for the editor. A better editor can be installed but it would take space better suited to PBBS functions.

If your line lengths are over 80 characters, your message would have to be taken to another program and edited. You are more likely to get it sent back.

## SOLUTIONS

### USING A TERMINAL PROGRAM

If you are entering a message from a terminal program, hit a carriage return (the ENTER key) before you send 80 characters.

## USING A WORD PROCESSOR

Many word processors will allow you to enter your message without regard to line-length. This makes editing, spell checking and other functions easier. They will then have a special function to allow the file to be saved in an 80 character per line format.

This file was done in the WordPerfect word processor. It was saved with carriage returns using the "DOS SAVE" function. It might help if you can set your word processor to show carriage returns on the screen. Consult your manual.

## DON'T GET FANCY

Many newsletter editors watch packet messages for ones they would like to print. Do not add fancy stuff the messages that you might want to see printed. It causes additional work to reformat them into usable text. Do not justify your text. Justification adds spaces between words to make both margins come out straight. It is very difficult to edit these extra spaces out.

Do not indent your whole message. These indentations are a pain to take out. Add two spaces between sentences. After each period, question mark, etc., there should be two spaces. Single space your messages. This saves network time as the extra carriage return does not need to be sent over and over as the message gets sent to other boards. Again, the newsletter editors will not have to remove the extra carriage returns. The use of capital letters is a questionable practice. Studies have been done showing that messages in all capital letters are more difficult to read.

## APLINK

Many times, the AMTOR PBBSs, called APLINK, will be used to send traffic. AMTOR has a very restricted character set. There are no lower case letters. Many characters, such as "~", "^" and "\_" will be ignored.

## PACTOR

MSYS will handle the link direction. There is no need to worry about the direction. Otherwise, the connect appears much as it does on a normal packet port.

## PROOFREAD YOUR MESSAGES!

After sending a bulletin, read it and see if that is what you meant it to say and how you meant it to look. After sending it, use the command "LL" (list last) to get the number and read it.

## EXPERIMENT

You can send messages to yourself. You can then read them back to see if what you have done is what you wanted to do.

## NTS BASICS

### WHY THE GOOFY FORMAT?

Your message may not stay on the packet network. It may be forwarded by nets using RTTY, CW, phone or whatever. These other modes are NOT error free. The preamble and format of your message will help standardize and check your message for better handling.

### NTS IS PICKY

Danged right, they are! NTS operators want to insure that the system works now, before the disaster. If they can get you using the standard now, you will not be a problem later.

Right now you are handling messages that might not mean much if they don't get to their destination. After a disaster, your message content may have much more meaning. You may be transferring messages about critical supply needs, about medical supplies that will save someone's life. Information to a family who's relatives assume they are dead.

If you do something wrong while handling NTS traffic, expect to get corrected. You will be one heck of an asset in a disaster if you know what you are doing. You will be one heck of a liability if you don't.

### A TYPICAL MESSAGE

```
| ST 44070 @ NTSOH
| TITLE: North Olmsted, OH (216)777
| Enter message--End with /EX or CTRL-Z
| NR 15 R HXG N8GNJ 4 Seattle, WA 9-18-89 0045Z
| To: Steve Wolf
|     North Olmsted, OH
|     216-777-1177
| -bt-
| Request home PBBS call
| -bt-
| Steve N8GNJ, Seattle, WA
| Operator's note: Reply to
| N8GNJ@N8GNJ.WA.USA.NA Seattle, WA
```



Let's examine the above message line by line:

| ST 44070 @ NTSOH

When you send a piece of NTS traffic, it has a special send command. The traffic indicator will help it on its way. It will also (sometimes) cause the last PBBS in the line to generate a message back to you telling you who took it off the packet system and where. In many cases, this might not be at its destination. An operator in Iowa might pull an Ohio message because he knows he can get it there quickly. He might be getting on a net that has an operator in the town that the message is destined for. ALWAYS use a ST zip @NTSxx command as all the forwarding PBBSs will recognize that without interpretation.

| North Olmsted, OH 216-777-1177

This title line tells that there is one message in the packet message and that it is destined for Ohio. If NOT disaster related, there may be many messages in the packet messages, as long as they are destined for the same location. The inclusion of an area code (AC 216) is sometimes used but does not mean diddley in many areas. If the precedence (explained below) is EMERGENCY or P, then that could be added to the title line. The title line is limited to 37 characters!

| NR 15 R HXG N8GNJ 4 Seattle, WA 9-18-89 0045Z

This is the preamble. NR 15 is the number of the message at the sender's station. On January 1, you start with message one. You assign each message going out of your station a number. "R" is ROUTINE. Other precedents are "W"elfare, "P"riority and "EMERGENCY". EMERGENCY is always spelled out! Any precedents other than routine should appear in the title line.

**"EMERGENCY"** deals with information related to the safety of life and property.

**"Priority"** is everything that is almost an emergency. It includes important messages having a time limit, notices of death and injury in a disaster area and press dispatches.

**"Welfare"** is for health and welfare inquiries and responses that indicate all is well. If all is not well, the message should be sent as Priority.

**"Routine"** is everything else.

The HX- is the handling instructions (if any). Handling instructions are rarely used.

HXA# -- Collect call within # miles (or unlimited if no #).

HXB# -- Cancel in # hours/notify originator.

HXC -- Report time and date of delivery.

HXD -- Report time, date, method and call delivering.

HXE -- Obtain and send reply.  
 HXF# -- Hold message until # (date).  
 HXG -- Mail or toll call delivery not required.

The number five is the check of the message. It is how many words you are sending. The stop character, the "x", is counted. The rest of the line is self-explanatory. For gosh sakes, use UTC! There are other people in the world and they don't all use EDST!

```
| To: Steve Wolf
|   North Olmsted, OH
|   216-777-1177
```

This is the address that the message is to go to. The phone number is almost always mandatory. It will probably just be serviced back without it.

```
| -
| -bt-
| Request home PBBS call
| -bt-
```

The meat, the message. Preceded and followed by a -bt- to set it off, the message should be no longer than 19 words. Rambling messages do not make it!

```
| Steve N8GNJ, Seattle, WA
| Operator's note: Reply to
| N8GNJ@N8GNJ.WA.USA.NA Seattle, WA
```

This is the signature to whom a response is to be forwarded. It is a real good idea to add your packet address to the end.

## CHECKS--COUNTING THE WORDS

If you are going to run into trouble, this is where it will be. Probably the best available advise is to not banter on the air about disagreements over the check. If they know more than you, they are right. If they know less, they are wrong.

Here is a quick list of some sticky check situations:

Alfred E. Neumann	3 words
Grand Cayman	2 words
NY	1 word
New York City	3 words
ARL SIXTY THREE	3 words
Fifty Six	2 words
6146B	1 word

You can change an improper check. DON'T CHANGE THE WORDING! If you do change the check, use a slant bar between the old and new values. For example, if you received a check of five and the check should be seven, note it 5/7.

### ARRL NUMBERED RADIOGRAMS

These are "standard" messages. The text of the message is simply ARL followed by the number spelled out: ARL SIXTY EIGHT. It allows the operator to quickly make up standard "are you OK" and the like type messages. There should be a file on your board describing all the different ARL numbers.

The one seen in a disaster situation is ARL NINETEEN. Here is an example:

```
| NR 132 W NO8M ARL 2 N. OLMSTED, OH AUG 5
| JANE DOE
| 1234 WEST 5TH
| GARY, IN
| PHONE 123-456-7890
| ARL NINETEEN
| JOHN SMITH 987-654-3210
| OR REPLY NO8M@NO8M.OH.U.S.A.NA
```

(Note that this message could be sent either to Jane Doe, a person in the disaster area, or to an agency who could follow it up. For example, it could be addressed to the American Red Cross agency in the area with the text requesting a check on the person.)

### DO NOT BOOK DISASTER TRAFFIC!

Booking traffic is sending a number of messages with the same information in one message. The stations in a disaster area do not have the time to separate them.

**WA8BXN MSYS PACKET BBS COMMAND SUMMARY ... Version 1.18**

=====

**Abort**..... Stop current action  
**Bye**..... Disconnect  
**Conference**....Multi-user\DX Node  
 ^ZH.....Conference help  
 ^ZQ or /ex.....Return to  
**PBBS**  
 ^ZU.....List users  
 ^ZA #.....Invite user on #  
**Download**.....Download from FILES  
**Grep**..... String search file  
**Help**..... Help  
**Information**..PBBS hardware  
**ID**..... Port definitions  
**Just Heard**... Log  
 JB.....BBS Stations  
 JD.....Digipeaters  
 JG.....Gateways  
 JK.....K and KA nodes  
 JM.....MSYS PBBSs  
 JN.....Net/Rom  
 JT.....TCP/IP protocol  
 Kill.....Kill a message  
 KM.....Kill mine  
 KT.....Kill traffic  
**List**..... Message headers  
 L x.....List catagory x  
 LC..... List catagories  
 LM..... List mine  
 LN..... List not read  
 LT..... List traffic  
 LL..... List last message  
 LL #.. List last #  
 LO #.. List older #=yymmdd  
 LU..... List unread to you  
 LY.....List read to you  
 LW..... List weather  
 L?..... List ? forward  
 L<< x... List fm x=callsign  
 L>> x....List to x=callsign  
 L@ PBBS...Messages to PBBS  
 L #..... List since #

**Read**..... Read a message  
 R x .... Read all catagory x  
 R@ xxxx...Read all at xxxx BBS  
 R> xxxx...Read all to xxxx  
 R< xxxx...Read all from xxxx  
 RM.....Read Mine  
 RE.....Read for export  
 RH..... Read with headers  
 RN.....Read only text  
 RP..... W/O mark as read  
**Send**..... Send a message  
 ^A..... Abort message  
 CC..... Carbon copy  
 REPLY #....Reply auto title  
 SP..... Send personal  
 ST..... Send traffic  
 SB..... Send bulletin  
 Talk.... Page sysop  
**Users**..... Users  
**Version**..... Version  
**What**..... Download list  
 W x.... What in x=subdir  
**eXpert**..... Toggle expert  
**X #**..... Lines per page  
**XC**..... Toggle catagory  
**XF**..... Multiple lines  
**XR**..... Toggle reply  
**XS**..... 1 line per reply  
**Yapp**..... Down and uploads  
 YW..... YAPP Directory  
 YD..... Download a file  
 YU..... Upload a file  
 \* ..... Comment to sysop

**NETWORK NODE COMMANDS**

**BBS**..... Connect to the PBBS  
**Bye**..... Disconnect  
**Connect CALL**Connect to call  
**C# CALL**... C on port # to call  
**Help**..... Help  
**Info**..... Basic Information

LL #....List last #	<b>Justheard</b> .... Limited output JH
L # #.List from # to #	<b>K-Nodes</b> ..... K-Node output
L"x".... List with x=string	<b>Nodes</b> ..... Nodes heard
L'x'.... List with x=sTrInG	<b>Nodes CALL</b> .. Info on node
L\$..... List bulletins	<b>Ports</b> ..... Port information
<b>Message</b> ..... Message of the day	<b>Routes</b> ..... Direct connect nodes
<b>Name</b> ..... First name	<b>Route CALL</b> .. Other node
NH.....Home board	<b>Talk</b> ..... Page Sysop
NQ.....QTH=City, State	<b>Users</b> ..... Users/nodes
NZ.....Zip code	
<b>Path</b> ..... Path to a user	
PF..... Path to a PBBS	
PC..... Request a callsign	