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MPG-6 SUPPORT GUIDANCE, MPG6A1V14A, 3/14**

NTSD STATION OPERATIONS

The following overview of NTSD operation is provided by the former Third Region Digital Coordinator, N3QA, and the Eastern Area Digital Coordinator, N4SS, for which we are very grateful. (From the original MPG Chapter 6. N4SS is now sadly SK.) Some information has been edited to reflect system updates.

All call signs used in this manual are intended to be generic for tutorial purposes and not related to the holders of those call signs in any way.

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6A1 NTSD STATION OPERATIONS

Please note:

In this document there are references to the “Winlink Classic” MBO software used by the NTSD. This is an older BBS type message handling package with keyboard as well as mass upload and export capability for packet and HF PacTor users. The NTSD MBOs operate at Area, Region and Section levels to provide BBS access to NTS traffic. Winlink Classic version 2.9, upgraded to 3.0, is generally in use at Area and Region levels of the NTSD, and is the BBS/MBO system discussed in the operational guidance here.

Winlink 2000 (WL2K) is a totally different messaging system operated by the Winlink Development Team, local Gateway operators and local clients. It is a global *Radio-email* system for forwarding messaging in the email format with multiple addressees, copies and binary attachments, and the system also has a firewall protected gateway to and from the public internet. This WL2K system may be accessed by NTSD operators using AirMail or other WL2K client software for *Radio-email* message handling, but it is not a BBS or MBO type system. It is an “email” client-to-client type message forwarding system. References here to Winlink 2000 or WL2K will be so noted. ARRL Radiograms may also be carried in Radio-email in the body text or attached as text-files, or attached as text Batch Files suitable for direct importing into NTSD MBOs. See the Radio-email guidance section of the MPG6.

6A1.1 ARRL STANDARD MESSAGE UPLOADING

Sample ARRL Formatted Message for Digital Systems. Note that the entire message, including preamble, address, text and signature, is uploaded in the TEXT upload to the digital system. The “TO” and “SUBJ” fields are used for routing purposes.

(BBS prompt: Enter “To” line.)

```
ST 99999@NTSCA <enter>
Subj.
[flags] SOMETOWN 555 555 <enter>
Msg.
1 R HXG N3QA ARL 5 CHESTERTOWN MD JAN 1
GUY ANYONE
123 MAIN STREET
SOMETOWN CA 99999
555 555 5555
BT
ARL FIFTY SEE YOU SOON
BT
JOHN Q PUBLIC

/EX <enter>
```

(Notes.)

TO: upload line

SUBJECT: upload line

MSG.: field lines

Preamble

Address Line(s)

BT, text start

Text Line(s)

BT, text end

Signature Line(s)

< blank line for clarity

UPLOAD, message end.

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(Text example with OP NOTEs shown.)

1 R HXG N3QA ARL 5 CHESTERTOWN MD JAN 1	Preamble
GUY ANYONE	Address Line(s)
123 MAIN STREET	
SOMETOWN CA 99999	
555 555 5555	
OP NOTE DELIVER ON WEEK DAYS	Address OP NOTE
BT	< BT, text start
ARL FIFTY SEE YOU SOON	Text line(s)
BT	< BT, text end
JOHN Q PUBLIC	Signature Line(s)
OP NOTE REPLY VIA N3QA 3RD REGION NTSD	Signature OP NOTE
	< blank line
/EX <enter>	UPLOAD message, end.

Once the BBS sees the /EX at the start of a new line, your message will be acknowledged and stored on the BBS for forwarding. You may then enter another message by using the "ST" command again or end the connection by using the "B" for Bye command.

NOTES:

ST 99999@NTSCA < [stn] (S)end (T)raffic - "**To**" line introducer, used to indicate an NTS message, followed by a space, then the Destination Zip Code and the letters NTS followed by the STATE or Province 2 letter postal abbreviation (not ARRL Section) of the destination. There may be spaces between the parts, i.e., 99999 @ NTSCA. After a space following the NTS[st], the "<" symbol may be added, followed by a space, and then the posting station or station of origin call sign ([stn]) may be entered for tracking purposes.

[flags] SOMETOWN 555 555 **Subject** line. Flag(s) (See the table below, Subject Line Flags), Town of the destination and the Area code and Prefix of the phone, or "NO PHONE", and/or call sign of an amateur addressee; 30 characters max. (A "QTC" may be seen at the start of the line in some software, but it is not required and uses up character space.)

For the following parts consult the MPG, Chapter 1, for more details on formatting ARRL Radiograms. Note that no punctuation symbols are permitted in the Radiogram. Only capital letters, figures, and slashes "/" are permitted.

[#] (in Preamble) **Msg. entry:** [#] Serial number of your message. Usually starts with "1" at the beginning of a year or month. Numbers only. No leading zeros. Preamble starts at this point. Service messages have the letters "**SVC**" followed by a space ahead of the message number. (The letters "NR" at the start of the line may be seen used by some operators, or in some software, to indicate the beginning of the Radiogram, but is a prosign used only in non-digital transmission over the air. It is not required here.)

R (Precedence) Routine precedence. The standard precedence level for normal message traffic. Others: Priority, Welfare, EMERGENCY. The word TEST precedes the precedence for exercise messages.

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HXG (Handling-Instructions)	Delivery by mail or toll call not required. If expense involved, cancel message and send a service message to the originating station. (HX_ instructions are OPTIONAL.)
N3QA (Stn-of-Orig)	Call sign of the station originating the message.
ARL 5 (Check)	Check (word/group count) of the text portion of the message between the BT lines. The BTs are not counted. In this case the ARL indicates that the message contains an ARRL Numbered Radiogram text. There are many ARL numbered messages to make the message transmission shorter. See the MPG Chapter 1.
CHESTERTOWN MD	Place-of-Origin. Place where the message originated (the location of the person for whom the message is originated).
(Opt. Time-Filed)	Not shown. 24 hour UTC unless marked EST, EDT, etc. (1830EST), placed just before a space before the month.
JAN 1	Month and day the message originated, UTC unless Time-Filed is not Z, then time and date must agree. Preamble ends at this point following the day figure(s).
ADDRESS:	The name, address, and telephone number of the addressee follow the preamble. Addressee begins on a new line. No punctuation symbols (other than "/") are permitted in the address. No punctuation, symbols or otherwise, is permitted in the city-st-zip line except that nine digit US zips are shown as 12345 DASH 6789. No punctuation, symbols or otherwise, are permitted in the phone number. See the MPG-1 for details on word formatting of email and URL address lines.
Address OP NOTE	Follows the end of the address if needed (re delivery). New line. Text formatting rules apply.
BT	A BT is used on a line of its own as a break between the address and the text. The "BT" is the preferred form of the older "<BT>" or "=", (voiced as "BREAK"), used to frame the text. (The "<" and ">" symbols can cause problems in some packet software.)
TEXT:	Next comes the text of the message. (Note that exercise message texts contain the words "test message", or "exercise" as the first and last groups of the text.) No punctuation symbols permitted except "/" - others must be entered as spelled-out words.
BT	A "BT" is used as a break between the text and signature (as above).
SIGNATURE:	Name of the person(s) sending the message.
Signature OP NOTE	Follows the signature if needed (re reply). New line. Text formatting rules apply.
(/EX spacing)	Blank line precedes the following "/EX" for clarity (no characters.).
/EX	The characters which tell the BBS that the message is ended. The "/EX" or "/ex" must be the only characters at the beginning of a new line (and the line ends by pressing the "enter" key to terminate the line. Commands may be in upper or lower case.

6A1.1.1 SUBJECT LINE FLAGS

Flags are used to show in the MBO Message Manager those messages requiring special handling. They indicate the Service Class of the message uploaded to the MBO and are entered by you when completing the Subject line. No flag is required for Routine messages. Service, Welfare, Priority, and HXD messages require flags so that stations and the MBO operator can see those special requirements without having to download the message. More than one flag letter may be required. These flags are consistent with NTSD Batch Files.

<u>FLAGS</u>	<u>MESSAGE SERVICE CLASS</u>
-	(No flag used for regular Routine messages.)
S	Service Routine message (SVC ahead of the message number)
D	Routine message with HXD
SD	Service Routine message with HXD
W	Welfare message
SW	Service Welfare message
WD	Welfare message with HXD
SWD	Service Welfare message with HXD
P	Priority message
SP	Service Priority message
PD	Priority message with HXD
SPD	Service Priority message with HXD

```
as in: ST 06111@NTSCT < W3YVQ
      WD NEWINGTON 806 594
```

```
      2 W HXD W3YVQ 12 BALTIMORE MD AUG 10
      ...
```

* Message formatting on the digital modes is best done with a simple, but precise, method. In the above example note that there is no line space between the preamble section and the address section. There is a "BT" between the address and the text section, and a second "BT" between the text section and the signature section of the message, both on lines of their own. Keep the message text to five (5) words per line. That makes confirming the check (word/group count) simple for the receiving operator.

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6A1.2 ONE SINGLE MESSAGE PER UPLOAD

Upload a single Radiogram for each ST entry. **Booking is considered poor practice on digital systems and is difficult to process at the delivery points.**

6A1.3 VHF CONNECTIONS

This exact protocol is specific to NTS Digital station N3QA. The procedure is the same for any Winlink Classic station. (N3QA is no longer operational). Many VHF SYSOPS have nodes on multiple frequencies: Thus the need to indicate the port on the node stack corresponding to the frequency desired for the connection, e.g., C 1 N3QA in the sample text. The number "1" in the command indicates to the system that one needed to put out the call to N3QA on 145.650 (port 1 on NEBALT). If the system operates on only one VHF frequency, it may be that only a sequence like C N3QA is required.

The above connect sequence will be similar on any VHF packet system. In general, for a single frequency system:

C (CALL SIGN)

On a multiple frequency system:

C (PORT #) (CALL SIGN)

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6A1.4 CHECKING FOR NTS TRAFFIC ON VHF PACKET OR PACTOR

Note that on Winlink Classic MBO stations there is a special command for listing NTS traffic that is in use. The command is not found on some packet BBS software. It is: "NTS".

The LT command to List Traffic is also available. The LT command lists all NTS traffic including those messages which have already been forwarded but have not been archived.

The syntax for keyboard operations is similar on HF PacTor connections to NTSD MBOs.

NOTES: On Winlink Classic a keyboard operator would see a total of six (possibly eight if bulletins are allowed) status code two-letter combinations. The first letter is either P or T or B: P for Personal messages, T for Traffic (NTS) messages, or B for bulletins.

The second letters are: N for Not Forwarded to a distant station nor accepted by a local station; Y for Yes forwarded or accepted; and K which means the message is in the process of being forwarded at that very moment on another port (HF or VHF).

Most of the NTSD stations do not allow bulletins. On those which may, the Y/N/K have the same meaning.

On different BBS stations there are other status letters in use. Most frequently: Y on Winlink Classic equates to F for Forwarded on the most popular FBB type packet BBS. P/T/B are the same as is N.

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6A1.5 EXAMPLE, LISTING TRAFFIC VIA VHF PACKET

Simulating N3DE as "you", N3QA as the NTSD station:

* YOU (N3DE as EXAMPLE):

C NEBALT

{ Connected to NEBALT....

C 1 N3QA

* BBS Response (blank lines not shown):

[WinLink-2.9-BFHIMR2T\$]

3RN NTS DIGITAL - NTS ONLY

Accepting NTS messages for destinations outside of 3RN.

Use command NTS to list NTS messages awaiting action.

New HF pactor scan freqs effective 10 March 2000.

Info on the web at: www.qsl.net/n3qa

(Use lower case letters)

You have 360.0 of 360 daily BBS usage minutes left.

N3DE de N3QA>

* YOU:

nts

NOTES: The listing for "LT" looks the same as the example below, however it includes traffic that has already been accepted or forwarded. The "NTS" command is a major step toward avoiding dupes. It is unfortunate that none of the BBS system except Winlink Classic contain such a command. Many local ops on a packet BBS will read an NTS message and act on it, but not kill it at the BBS. Any operator following would see that the message had been read, but would have no idea as to whether or not it was accepted for delivery or forwarding.

Most VHF BBS use the "TF" to indicate that a message has been forwarded to another BBS. One should NOT download for action any message that has been forwarded. On Winlink Classic the equivalent is "TY" to indicate an NTS message which has been forwarded.

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If one uses the command "NTS" rather than "LT" one will never be shown messages that have been forwarded or accepted for delivery. On Winlink Classic there are four traffic status indicators. Note the following:

- 1) TN for Traffic NOT previously accepted by a station checking nor forwarded to another BBS.
- 2) TY for Traffic YES it has been forwarded. Do not download TY marked traffic for delivery or forwarding.
- 3) TK is traffic that is in the process of being sent on another port, e.g., on an HF port if one is checking in on the VHF port.

Persons using the NTS command will never see any of these except TN which represent available traffic.

* BBS Response to the "nts" request:

NR	TS	SIZE	TO	FROM	AT	FILED (Z)	SUBJECT
21305	TN	512	NTSMD	WX4H	NTSMD	0314/1822	WALDORF 301 555
21304	TN	973	NTSMD	WX4H	NTSMD	0314/1822	S BALTIMORE 410 555
21303	TN	269	34467	WX4H	NTSNH	0314/1821	MORLAND 603 399
21302	TN	371	01436	WX4H	NTSMA	0314/1821	BALDWINVILLE 978 939

(Note the "S" Flag in the message 21304 Subject field indicating that the message is a Service message. Up to three possible Flag letters may be shown. See the section on Subject Line Flags in 6A1.1.1)

N3DE de N3QA>

* You (seeing one for MD):
R 21305

* BBS Response:

Nr: 21305 To: NTSMD From: WX4H Filed: 03/14 18:22 UTC
WALDORF 301 555

1400 R HXG AD4IH 15 SAN MARCOS CA MAR 14

ROBERT L SOMEONE

5105 SOME ST

WALDORF MD 20601

301 555 5555

BT

MAKE USNCVA REUNION 2000 THE

BEST EVER X SEE YOU

IN SAN DIEGO IN SEPTEMBER

BT

SCOTTY DAVIS REUNION HOST

SVC TO AD4IH LAKEFLAND FLORIDA

Accept NTS Message (YES, NO, CANCEL)?

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NOTE: Unless "YES" is the response when an operator is asked if he accepts the traffic, then it remains available for a different operator to receive. There is no need to relist unless one mistakenly responds "YES" rather than "NO".

"CANCEL" is only available to the operator to whom the message is addressed or to the operator who put the message onto the system. It allows for "cancellation" of the message if there is an error. Other operators who attempt to "CANCEL" receive an error message.

* You (Note you must use YES or NO. Y or N will not be accepted):

YES

NOTE: Entering "YES" converts the listing of the message status to "TY". On Winlink Classic one should never read a message with "TY" status to deliver or forward on a local net. The exception to that is if the operator who originally accepted the message lost it and wanted to re-read the message again. He could then issue the "LT" command and get the listing of all traffic (forwarded and not forwarded) remaining on the system. Messages are not "Killed," but remain on the system for a certain period of time. Again, the use of the "NTS" command prevents a lot of problems concerning dupes.

* BBS Response:

NTS Message Accepted

N3DE de N3QA>

* YOU (If there are more messages you can handle then issue another R # command.

Otherwise use the B for Bye command):

b

NOTE: In the listing of traffic available above there is a message Subject listing with a Flag of "S" ("Service" traffic). Unfortunately the only way an operator can see to whom the traffic is actually destined is to read the message using the "R #" command. The operator should NOT accept the traffic if he cannot handle it. The call sign of the recipient might have been shown after the phone number (if sufficient field space is available from the typical 30 character limit), or in place of the phone number, thus enabling the reader to decide if a path is available, perhaps by radio, if there is no outlet in the given phone Area or Exchange.

Booking traffic should be avoided by the practice of putting each message in as a separate piece of traffic. Booked traffic works well on CW and Voice nets, but it does not on digital. The exception is that a packet representative from a section net could accept booked traffic and disseminate it at the section level.

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6A1.6 EXAMPLE, SENDING NTS TRAFFIC ON VHF PACKET

Simulating N3DE as "YOU", and N3QA as the NTSD station.

* YOU (N3DE as EXAMPLE):

C NEBALT

{ Connected to NEBALT....

C 1 N3QA

* BBS Response (blank lines omitted):

[WinLink-2.9-BFHIMR2T\$]

3RN NTS DIGITAL - NTS ONLY

Accepting NTS messages for destinations outside of 3RN.

Use command NTS to list NTS messages awaiting action.

New HF pactor scan freqs effective 10 March 2000.

Info on the web at: www.qsl.net/n3qa

You have 359.5 of 360 daily BBS usage minutes left.

N3DE de N3QA>

* YOU:

ST 99999 @ NTSCA <enter>

NOTE: The spaces between the 99999 and the @, and between the @ and the NTSCA, are optional. Personally, I like to put them in simply because it is easier to read for the person typing them into the system.

* BBS response:

Subj:

* You:

[flags] SAN SOMEWHERE 415 555 <enter>

NOTE: For an NTS message the subject begins with any required Flags (see the section on Flags in 6A1.1.1) and then followed by the city of destination. The phone area code and exchange should be given in the listing if they are available. If there is no phone number it is best to include that information as "NO PHONE". Messages should have a phone number for the addressee if it is at all possible. If there is an amateur call for the addressee, that should be listed. Note that on most BBS systems there is a limit of about 30 characters in the "subject" line. More will be truncated. ("QTC" is not required to begin this line.)

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* BBS Response:

Msg:

* You:

```
1 R HXG N3DE 15 BALTIMORE MD MAR 13 <enter>
DAN ANYONE <enter>
123 SOME STREET <enter>
SAN SOMEWHERE CA 99999 <enter>
415 555 5555 <enter>
BT <enter>
ARL FIFTY ALL IS WELL <enter>
HERE X WE HOPE THE <enter>
SAME WITH YOU X LOVE <enter>
BT <enter>
MOM AND DAD <enter>
<enter>
/EX <enter>
```

NOTE: The BBS only stops accepting text when the /EX is received at the beginning of a new line. Otherwise, the actual NTS message preamble, address groups, body, and signature are all "text" to any BBS. A blank line before the "/EX" line helps to make the end of the signature section easier to read for the receiving operator. It is good form. SVC followed by a space is entered ahead of the message number for Service messages. ("NR" is not required ahead of the message number in the Preamble, although used by some operators.)

* BBS Response:

Message Filed
N3DE de N3QA>

*You:

B

(BYE, disconnect command)

NOTE: Letter case does not matter on the commands. In practice many hams use upper case all of the time to avoid the need to capitalize words. (Radiograms may contain only capital letters.) If you wish to post an additional message simply issue an additional "ST" command.

6A1.7 HF DIRECT DOWNLOADING AND UPLOADING COMMANDS

When connecting directly to the NTSD station the commands for listing traffic, downloading traffic, and uploading messages are the same as above without the need to establish connections through other packet BBS links.

Remember, when on HF PacTor, unlike a packet BBS, there is only ONE QSO permitted at a time. Multiple connects are not permitted. Listen before transmitting, and also remember that such fixed NTSD stations do not "own" their frequency. Give the right of way to any QSO's in operation on or near the desired calling frequency.

Note that on NTSD there are HUB stations in the Eastern, Central and Pacific Areas. Most traffic for out of area flows through the hub stations, but at times any of the NTSD stations acts as a mini-TCC and goes direct to another area's hub.

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6A1.8 UPLOADING FILES OF MULTIPLE MESSAGES, SMF COMMAND

The SMF keyboard command is no longer recommended by the NTSD staff.

It was infrequently used by keyboarders using old packet programs and connecting to NTSD MBO stations. It allowed a keyboarder to prepare a file of messages to be uploaded to a Winlink Classic MBO.

For details on its use, contact the appropriate NTSD ADC or DRS station for your area.

MBOs and BBSs should not use this command to move messages due to the lack of BID/MID control on the receiving end.

(Note that there is also a method for uploading Radiogram traffic to an NTSD MBO using AirMail in handshaking mode using special "To:" line addresses and "Post Via" entries in its email formatting window - the Radiogram placed in the body text. This method may vary with the MBO software in use. Contact your NTSD ADC for details and use with caution.)

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6A1.9 INTERFACING WITH SECTION NTS SSB AND CW NETS

The NTSD operates in parallel with the manual NTS system of nets. Once inbound traffic arrives at a Region NTSD station, however, the systems merge.

Operators from the Local and Section manual nets need to access the NTSD, offload the inbound traffic, and see that it is passed to the outlet stations on those nets. The majority of amateurs available to deliver traffic to the public and served agencies check into those nets.

Often the inbound traffic from NTSD Region stations is forwarded to a controlled VHF/UHF packet BBS or node station where it can be picked up by local packet operators for delivery, or forwarding to the manual nets. It is important that this packet server be monitored and controlled to assure that all NTS traffic is handled in a timely fashion, or serviced as required. An open loop packet system without such safeguards endangers the integrity of the NTS system.

Additional stations are needed, and encouraged, to establish regular contact from the Local/Section manual nets to the NTSD Region servers to receive and distribute messages. Developing equally reliable NTSD Winlink Classic servers for each Section over the long term will enhance our capabilities. All of these stations can likewise handle outbound traffic routed via the NTSD.

In this later case, the routing of outbound traffic via the manual pathways to Region Nets, or alternatively, via NTSD, is a matter of concern. A balance must be struck between loading on the respective paths so as not to “starve” one or the other. Consult with the Section Traffic Manager in your Section for guidance on loading ratios, preferences of the leadership, etc.

Manual operators are more easily starved of motivation than automated digital equipment - an obvious concern here. The manual NTS operators, the backbone of the NTS since its inception, are a valuable national resource to be preserved. When all the advanced equipment fails, the mics and keys at individual station locations will enable us to sustain the overall system.

On the other hand, the NTS system will benefit from a smoothly operating reliable digital forwarding system, manned by live operators to assure functioning and delivery, and increased volume of error free throughput during the heaviest workloads. This will be especially evident in disaster services when the traffic loads become very high in both volume and criticality.

There is always a notable shortage of stations devoted to providing the link between the NTSD system and the Local and Section connections. Some traffic must be pulled from NTSD servers and forwarded to manual Region nets to get it into the target Sections. Plenty of jobs available! The NTSD folks have put the effort into building the system---give them a hand.

RADIO-EMAIL

The new *Radio-email* section in the MPG, Chapter 6, Section 6.2, provides guidance on how the Winlink Classic NTSD MBO system and the Winlink 2000 (WL2K) system will work together hand in glove to improve NTS service overall. The WL2K *Radio-email* system can be used to transport text Radiograms singly or in bulk between NTSD MBOs, and between ARES[®] and NTS WL2K Target Stations and NTSD MBOs, stipulated by the NTSD Area ADCs, anywhere for handling. Conversely, the properly equipped NTSD stations can handle messaging in the *Radio-email* format to augment emergency communications at all levels of the ARRL Field Organization, including infrastructure independent peer-to-peer forwarding nation-wide.

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6A1.10 WHY DIGITAL? N4SS

THOUGHTS ABOUT “WHY DIGITAL.”

by Nick Zorn
Eastern Area ADC

1. Digital is approximately equal to CW in weak signal ability to successfully pass messages. There are instances when each is superior to the other. Both CW and digital are superior to ‘fone in weak signal conditions.

2. Digital is superior to both CW and ‘fone in accuracy. Further, messages handled via digital circuits present themselves in printed form which eliminates the problems most of us have, even with our own handwriting. Mine is seriously deficient. Also, digital always sends things perfectly, which is something I can’t say for my own CW sending. Also, digital receives perfectly or not at all. Current software allows for compression which reduces the size of a given message to be transmitted and also adds more error checking functions.

If errors occur it merely aborts and breaks the link. So digital promotes accuracy. Please note that none of this contemplates the use of Baudot or plain ASCII.

3. Since most MBOs operate continuously (except during threats of lightning damage) they offer more opportunities to transmit traffic and thus better speed than the cyclic nets. The software in use allows for scheduled fully automatic forwarding throughout the day.

4. Usually, and especially under good signal conditions over longer paths, digital can pass messages faster than they can be read by human operators. For these reasons digital is a better choice for Area and probably Region operations. It must be stressed that digital can only augment and never replace local and section nets because of the origination and delivery functions.

5. Contrary to present practice, digital is more suited than ‘fone for non-tactical emergency communications. In situations where accuracy is critical digital is the only choice. Appropriate equipment and support (and access) will have to be provided for digital to provide the support that it is capable of to served agencies.

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Ed note: Nick, N4SS is now a Silent Key. Many digital operators dedicate their continued work in memory of his tireless efforts to help build the NTSD.

6A1.11 EQUIPMENT AND SOFTWARE REFERENCES

Contact your Area Digital Coordinator for information about Winlink Classic MBO and keyboarder software (version 2.9 and the upgrade to 3.0). The Airmail software is recommended for beginners and those who intend to keyboard only.

AirMail is not only for beginners. It is not only great software to connect with the Winlink Classic BBS systems, but AirMail, RMS-Express, or Paclink software is required to connect with any of the Winlink 2000 (WL2K) Packet and HF Gateways around the world which forward Radio-email. Radio-email may carry Radiograms in the body text or in text-file attachments. Therefore, AirMail may be used for both purposes. AirMail (and RMS-Express) may also be used for the direct transfer of Radio-email directly between two stations.

Once a connecting station using AirMail is recognized as a regular user, the Winlink Classic sysop can assign traffic destined for that station to be automatically downloaded to the station. The AirMail software will automatically accept it and put it into the Inbox - just like an email system. This works not only with personal messages, but also with NTS messages, either by call sign, Zip Code, State, etc. At this time (mid 2000) AirMail is compatible with SCS, AEA, KAM, and MFJ data controllers. Check the list of built-in TNC drivers in the AirMail packet setup menu. For hardware questions refer to the manuals for your TNC, and the Winlink Classic and AirMail Help files. For more involved questions contact the Area Digital Coordinator or an experienced Winlink Classic MBO Sysop.

6A1.12 NTSD FREQUENCY LIST

Consult the NTSD station lists provided on NTSD server resources for station frequencies, schedules, modes and links, or contact your Area Digital Coordinator for documentation or URLs to web sites where NTSD MBOs are listed.

All frequencies are listed in center frequency notation. The actual radio "dial frequency" depends on the type of modem being used and whether you are operating LSB or USB. Historically NTSD has used LSB, but the preferred practice now is to use USB to better match the radio's audio frequency response bandwidth. Consult your ADC for actual conversion formulas based on the modem and mode you are using.

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W3YVQ, SEP 18, 2002

Changes:

May 16, 2012: Removed old packet SMF file upload guidance no longer in use.
May 30, 2012: Removed Prosign "NR" ahead of preamble. Required "BT" lines before and after text. Removed "QTC" at the start of the Subj. line and added Flags. Removed the "/" between the town and the phone Area code in the Subj. line. Added the section 6A1.1.1 on Flags.
Jun 12, 2012 Section 6A1.12 modified to indicate center-frequency and USB preferences.